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An Irish Quarterly Review

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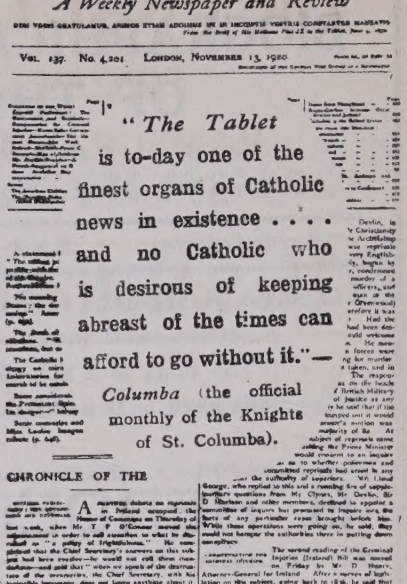
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THE SHANNON SCHEME AND THE TEACHING OF SCIENCE

A Plea for Realism in Education

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WITH much reason the promoters of the Shannon Hydro-electric Scheme may claim, that in it they offer the people of Ireland the most practicable means for the development of the country on the lines that all modern peoples must follow in order to attain prosperity. Their hopes, however, cannot be realised unless the people as a whole have a clear understanding of the value of science in modern industrial progress, and, above all, unless the generation that is growing up in our schools is equipped with the technical skill and knowledge necessary to fit it to do the work that will be open to it when the Shannon Scheme has reached its development. These conditions can be fulfilled only by a wide extension of instruction in science, especially as related to electricity in its industrial applications.

The Shannon project is indisputably a remarkable effort in constructive statesmanship, and it would be a national calamity if anything were suffered to impede its success. As Dr. MacLaughlin says in his excellent booklet on the Scheme, electricity is a commodity that must be "merchandised." For this, propaganda is needed, and the readiest and best mode of propaganda is by way of instruction. A people who appreciate the importance of science in modern life, and possess the technical knowledge and skill enabling them to utilise it, will readily welcome the instrument that the Shannon Scheme proposes to put in their hands. The schools can and ought to contribute to the success of

this great national undertaking. It, therefore, is the duty of the educational authority to ensure that the schools it controls shall take their due part in this work of national service.

In order to effect this end, there must be a change in the orientation of the schools towards science and, indeed, towards the curriculum in general. Tradition is a potent force in regulating scholastic aims and practice, with the result that it is often difficult to trace any connection between the work of the school and the life outside, for which it surely is its function to prepare. Too frequently its way of preparation for it is to ignore it in its work. To take cognisance of it to the extent of allowing it to interfere with the traditional practices is stigmatised as uneducational. Social efficiency is surely a worthy aim, and it must include the idea of industrial competency. Yet, if one ventures to advocate what, in modern phrase, is termed the " vocational " aim as desirable, one is put aside as a mere utilitarian, or refuted in semi-jocose fashion by an allusion to Mr. Gradgrind and his cult of facts. " Cultural " aims are the chief element in the fashionable gospel of education—" culture " in this connection being a term of no very definite connotation, and implying that the business of the school is not to prepare for any vocational end except in roundabout and clandestine fashion. Hence springs the plain man's distrust of the schools as useful national institutions, and hence, too, his disinclination as a tax-payer to bear the burden their support entails. Even the teacher himself in his candid moments admits the unreality and make-believe of much of his work.

This demarcation between the school and the activities of life is really a survival from the ages when society rested on a basis of slavery or economic serfdom, and when as a consequence educational theory had only to consider those whose economic position enabled them to pursue cultural ends without any reference to the concrete

problems of livelihood. The conditions of modern life are so changed that the ancient paths no longer are safe for the modern traveller to follow. The Olympian aloofness from life and its problems will no longer avail to justify education. School work must be correlated to national ends, and it will benefit by being connected up with actual life and its problems. In this way it will come to have a meaning that will revitalise what too often is meaningless routine in current educational practice, and in consequence is only a source of boredom to the teacher as well as to his pupils. As Antæus was invincible so long as he remained in contact with the earth, so the best service that one can render to education s to let the fresh strong wind of actuality blow through its dusty and cobwebbed corridors, and sweep away in its course the pedantry and formalism that are there entrenched to the serious detriment of sound and reasonable educational practice.

In no department is this contact with reality more necessary than in the teaching of science. Here we have a subject where positive knowledge is surely a thing worth having. Can any one claim that current methods of teaching science give this knowledge, or even recognise that its attainment is a valid educational aim? For almost three decades the science teaching of our secondary schools has followed the lines known as the "heuristic method"—surely an unhappy misnomer. In school conditions such lines are not only utterly useless from the standpoint of national utility, but also educationally indefensible. In the great Continental countries, famous for their scientific achievement, notably in Germany, such methods find no place in school work: as the methods proper for the training of experts in the work of advanced research, they are rightly reserved for the specialist student of University status. In England—whence they were imported to our country—they have been condemned frequently by the highest scientific

authority :—*e.g.*, Sir Richard Glazebrook, Director of the Cavendish Laboratory, Cambridge, some eight years ago made public avowal of his regret for his share in foisting on the school the methods of advanced research.

Nevertheless, here in Ireland these methods still enjoy official sanction, for the enthusiasm for educational reforms that has marked recent years has left the aims and methods of our science courses practically untouched. It requires no argument to show that scientific knowledge is at least a desirable object for the schools to aim at—and yet we are still content to follow methods that certainly will not give that knowledge and avow that it is no part of their aim to impart it. Laboratory dilettantism continues to be a worthier school object than the attainment of real scientific knowledge. The most commendable line of reform in respect of school science will be that which will substitute for the formalism that at present dominates school practice the acquisition of scientific knowledge. It is more than time to put an end to the fiddling with scientific instruments, the legerdemain with beakers and crucibles that masquerade as science teaching in the modern school-room.

Whatever doubts one may entertain as to the legitimacy of vocational aims in secondary courses, there can be no hesitation in holding that they must be the dominant aims in technical programmes. The test to be applied to any course of technical instruction is a simple one—does it make for industrial efficiency? If it cannot answer this test it must stand self-condemned, and the public funds required for its maintenance should be expended on other public purposes. Irish technical instruction, if judged by this test, will have to be condemned as inefficient. Much public money is devoted to it, but it is hard to see where it has increased industrial efficiency in any degree commensurate with its cost to the community. Its failure in this respect may be explained in some degree by the fact that Irish industrial

enterprise of the type likely to be benefited by such training does not exist to any great extent.

While there may be some reason in this plea, it is by no means an answer to the charge of failure. In the first place our technical institutions embrace many activities that are technical in no true sense of the term : thus in many cases they are doing work that rightly belongs to the primary or the secondary school, and sometimes even to the university. They are not, to the extent they ought to be, technological schools. They ought to train pupils in the practical mastery of the processes of trade and crafts. It is true that they do this to some degree, but far too much stress is laid upon the scientific principles underlying trade and craft processes. In this they follow on the lines of the English technical system, which, indeed, is the model on which they are founded. The English Technical Instruction Act (1889) specially enacts that the term " technical instruction " shall not include " teaching the practice of any trade or industry or employment," confining it to the provision of instruction in the principles of science and art applicable in industry. It is true that the English idea of the purpose of technical instruction has been gradually widened, and new subjects of a distinctly technological type have been brought into the programmes. Still, the dislike of technological instruction persists, and tends to limit the utility of the technical school as an agent for the general diffusion of skill in the practical processes of trade and industry. The Irish system by reason of its provenance has been hampered in its working by a similar limitation.

With the development of the Shannon project it is but reasonable to look forward to a considerable advance in Irish industrial enterprise, based on the supply of electric power that will be available. The forecast made by the contractors, as given in the official publication " The Electrification of the Irish Free State," is a con-

servative and cautious estimate. But it certainly means that there will be a large market in the near future for labour equipped with the necessary skill and knowledge of electricity in its industrial applications. It is essential that immediate steps be taken to equip the people with the practical skill that will enable them to use the Shannon power to the greatest advantage of themselves and the country. For this purpose it is necessary that the educational authority should take the technical system in hand and turn it in this practical direction. Through the technical school provision must be made for the lower grades of skill—for the higher it is to be expected that the Universities will provide. Doubtless it will be necessary to add to the number of centres where it is possible at present to obtain this instruction. Existing technical schools are urban in site and thus they cannot cater for the instruction of rural areas—but the additional provision required will entail no great increase in expense. These aims, though of great importance to national well-being, can be attained by modest steps. What has been done in other countries may well be done here. The following passage from W. H. Dawson's well-known book, *The Evolution of Modern Germany* (4th edition, 1914), offers us a useful model :—

> The larger technical agencies apart, however, invaluable results are often achieved by the simplest and most inexpensive means—by the humble village class conducted in the winter evening hours by the light of the oil-lamp in the low-roofed village school-room ; by the travelling exhibition of samples of skilled handicraft which sets provincial ambitions aglow ; by the itinerant teacher who carries a vitalising store of rudimentary knowledge from hamlet to hamlet in the sequestered mountain districts, where home industry is the main support of the population during half the year.

The needs of rural Ireland in this matter of technical instruction seem to call of themselves for an imitation of this simple plan of providing knowledge definitely related to occupational interests and necessary for their

efficient handling. Such instruction in any event would be desirable as a means to increase industrial efficiency ; but in the new conditions its provision is almost imperative, if the Shannon Scheme is to be utilised to its full extent. In the next ten years it is expected that electric power will be generally available throughout rural Ireland : in order that it may be utilised, and that the public expenditure involved in its provision may not be wasted, some such agency of instruction is required. All that is really necessary is to readjust our existing institutions so that they meet the new conditions.

As regards training in higher technology, it would seem to be best to give it in the University. Industry, whether its sphere be the factory or the farm, is as much entitled to professional status as, say, law or medicine. Agriculture is already a subject of university study, and similar provision should be made for other technological training. Science in its applications to industry needs the higher training just as much as the research work of the pure scientist. The demand that the University should undertake this duty is one that it cannot ignore. Those who demand it do not need to be told that the work of pure scientific research is the foundation on which to rear the edifice of applied science. The history of applied science shows this beyond dispute. But it is necessary for pure science to pay attention to the practical needs of a modern nation in regard to applied science. This may be done without injury to the research work of the pure scientist. In fact it will often be useful for him to fix his thoughts on some practical end outside theory. Indeed, it may be said that there is no sharp line that can be drawn between Pure and Applied Science, and in asking for university recognition of science in its applications, one is really only asking that the University should connect up its activities somewhat more closely than has been its practice with the industrial needs of the nation from which it derives its support.

Surely there is nothing derogatory to high educational ideals in thus linking up the lines of training in the school or in the university with the life of the world around them. "Knowledge for its own sake" is a noble ideal, but its nobility is not lessened if it is regarded from a somewhat wider point of view, and some account taken of its uses. This would be assented to by many of the greater humanists, one of whom may be appropriately quoted here :—

Ea mihi praestans philosophia visa est, quae in urbibus habitat et solitudinem fugit, quae cum sibi tum communibus studet commodis, et prodesse quam plurimis cupit.

It is a far cry from the 15th century humanist to the Shannon Scheme, but his support would not be refused to an educational project that seeks to make knowledge available to the whole community, for the better ordering of individual and national life.

W. J. WILLIAMS.

Comments on the Foregoing Article

No. 1.—By Rev. Edward Leen, c.s.sp., m.a., d.d.

President of Blackrock College, Dublin

For a great number of years a system of Science instruction has been in operation in our Secondary Schools, and its place on the curriculum was such that most of the pupils who did not pursue a Classical course, normally entered the Science classes. Great expectations of immense advantages to be attained through this widely-diffused technical instruction were entertained in the beginning. But even the most ardent supporter of the system cannot maintain that these expectations have been realised. This could not be otherwise, for the idea which governed it was unsound for many reasons. Its originators were guilty, in the first place, of what is known as the fallacy of "projection"; they judged

the attitude of mind of the young student beginning " Science " to be somewhat similar to that of an adult person who had already made some progress in its study. According to their views, the subject should be taught by way of experiments carried out by the pupils themselves ; they judged the only sound method to be the " heuristic " one. It is quite true that all intellectual progress, on the part even of the youngest student, should be attended by a process in which he is trained to use his own powers, to correlate his scattered items of knowledge, unite them into new combinations, and thus by his own efforts pass from the known to the unknown. And this activity on the part of the learner should become more and more pronounced as he advances. But it is, really, only when his intellect has reached a certain amount of strength and maturity that " discovery " enters as a large element into the process of growth in knowledge. In the earlier stages it should play a very subordinate rôle, and learning should mostly be the reception from another of knowledge already arrived at by human thought.

One can see how unsound this method of science instruction is, by considering its effects if it were applied to any other subject in the school curriculum. How slow would be the progress of a student in the knowledge of Latin, for instance, if he had patiently to work out for himself the origin and nature of its grammatical structure, if he were to try to walk in his feeble manner on the road trodden by the adult and trained grammatist. If we extend the application to the complete cycle of studies that form the sphere of human knowledge, it is easy to see how disastrous would be the results. Learning would be a series of beginnings, and culture would remain primitive. Advancement lies in making the knowledge that has already been gained by the intellect of man a basis of further acquisition. The task of the teacher is to put the pupil, as rapidly as the slow evolution of his mental faculties permits, in possession of the inheritance of thought that has come down to us from preceding ages. Discovery should start from the limits reached already by those who have gone before us ; it is an idle task to start out to discover the ancestral home in which one has been born !

Theoretically unsound, the heuristic method was in practice a pure fiction. The student's work in the laboratory was dignified by the name of " experiment," but in reality it was not experimentation at all. The teacher arranged, guided, and controlled the work to a large extent. The exercises were " set " or rather stereotyped. A great deal of time was spent in going through

the different mechanical stages of the test, and the results were not often commensurate with the efforts (considered in their purely material aspect) put forth. The pupil very frequently failed to make his conclusion correspond with the true result of the data examined. It could not be otherwise, for not one boy (and, *a fortiori*, not one girl) in five hundred would be equipped with the precision of thought, the patient observation of detail, and the scientific keenness that belong to the successful experimentalist. These qualities come only with years, and it is vain to look for them in those who are of the secondary school age. The absence of them, in all but the most exceptional cases, prevents the greater part of the laboratory work from being a reality. Obliging the average student to go through this sham (if the word is not too strong) for several years in succession had a very serious evil effect on the general intellectual formation imparted in the school.

Contemporaneously with the giving of " Science " (in inverted commas) an important place on the school programme, there came a noticeable lowering of the intellectual level in the schools. There was a perceptible decline in the number of boys who attained to " exhibition " standard, and even in those who reached that level there was a marked falling off in the quality of their linguistic and literary efforts. It would be bad logic to place the whole blame of this result on the teaching of science, because it happened to be coincident in time with the universalisation of science teaching in the schools. Without going so far, one who has studied this phenomenon cannot be accused of exaggeration in stating that the methods of the science laboratory were a contributory cause of great moment. The experimental system demanded class hours of much greater length than is assigned to the other subjects on the programme: they usually lasted from 80 to 120 minutes. During that protracted class period, the young student is engaged at work which leaves great scope to his natural divagation of spirit. The attention he bestows on what he is occupied with is largely of the sense order or merely mechanical. It is only a keen scientist that could maintain concentration of thought throughout the whole development of the slow process of a long experiment. " Pottering " habits of work, distraction of mind, loss of power of concentration—these were the immediate results of the system that was foisted upon us, and these results were the necessary psychological consequence of that system, when considered in relation to the average type of student submitted to it. It was only a boy of an exceptionally scientific turn of mind that could escape these consequences;

for the overwhelming majority they were inevitable. If the pseudo-science classes took place in the morning hours, when a young student's power of attention is at its highest, it is difficult to estimate their disastrous effect on the remainder of the school day, for the students carried the " dilettante " and " pottering " habits developed in the laboratory into the other classrooms. Intellectual attention became increasingly difficult, and the best efforts of the mathematical and language professors were frustrated by the loss of power of concentration of thought on the part of the pupils. Sense began to usurp the place of intellect, and this is in great part the cause of the remarkable decline of intellectual calibre that is to be noticed generally in the schools and in the University Colleges of the country.

A reform is needed in all this, and the reform should lie along those lines dictated by the necessity of bringing a remedy to the defect inherent to the system that has just been analysed. The imparting of scientific knowledge in our schools should be less experimental, and more theoretic. Experiments should not be done away with, but should be made subordinate and used mainly to aid the exposition given by the teacher. They should be utilised as practical demonstrations of the matter taught, and the student should not, generally speaking, be allowed to waste his time discovering results. This will allow of the classes being reduced to reasonable limits, and will necessitate more purely mental attention on the part of the student. A longer period might be set apart, once a week, for the practical demonstrations that the teacher might not have been able to fit into the time allowed for the regular theoretic class. There is no reason why, in this subject of science, there should be a departure from the ordinary road which we have to travel in the acquisition of knowledge, or a change brought into the ordinary relations between teacher and disciple, in which the former's function is to impart, the latter's actively to receive the fruits of human thought.

Whilst it is undoubtedly necessary that the study of science should be an integral part of a well-balanced general education, its importance should not be exaggerated. It would be a deplorable mistake to turn our secondary schools into academies of mathematics and science. These subjects deal with quantity and the quantitative relations of material things, and one can no more prepare for life by such a training than one can reduce to terms of quantity life's activities. Education is meant to be a preparation for life—it must, assuredly, be vocational, but the vocation to live is higher and broader than and prior to the voca-

tion to a certain manner of earning a livelihood, and should take precedence of it. The end of education being the training for life, the main object of schools, especially secondary ones, should be to provide such a training. Life is governed by thought, and to live rightly, no matter what may be the particular conditions which one selects as life's setting, no matter what career may be chosen, one must be trained to judge correctly and estimate justly all the problems that present themselves in the art of right living. The imparting of sound principles of evaluation, to be applied to art, literature, ethics and religion, is the ideal at which a secondary school should aim. For from its halls issue those who, ordinarily, pass to the universities and thence to the leading positions in the control of human affairs. In order that one may govern well, life in all its varying aspects, in its complex variety, and in its evolution through the ages, must be well understood—and this understanding comes principally through the study of the history, of the art, and of the literature of the civilisations that have preceded us. A true education should be "humanistic"—a mere analysis of the adjective justifies the statement.

One can speak of a training in science and mathematics, but scarcely of a mathematical education. An educated man should have such knowledge of these subjects as would enable him to deal successfully with those aspects of his life into which they enter. But it will be fatal, from the point of view of national progress and culture, to make our educational system an instrument for turning out a nation of mere scientists or mathematicians. Advanced and specialised studies in science and mathematics should be reserved to schools definitely technical in objective. We should no more ambition to be a nation of engineers than to be a nation of shoe-blacks. A practical education is one which enables a man to deal with life, taken in its totality, in a practical, that is, in a wise manner. The study of science and mathematics may impart factual and quantitative knowledge; it can hardly be said to impart wisdom. The mathematician may be wise, but it is not because of his mathematics, but rather in spite of his mathematics. For the practice of dealing with only one aspect of reality—and that an abstract one—develops the mental habit of dealing with life and its problems as if they were constituted entirely of forces to be estimated in terms of quantity; the consequences are very unpractical and disastrous. A nation progresses by rising to a higher and more intelligent concept of life, a more perfect taste in art and literature, and a more harmonious adjustment of individual, social and political relations, and not

merely by covering its territory by an ever more extensive network of electric wires ; though these, too, may serve their uses.

E. Leen.

No. 2.—By John J. Nolan, M.A., D.Sc.

Professor of Experimental Physics, University College, Dublin

Those who are in a position to observe the product of the Irish secondary schools will have noticed in recent years what appears to be a progressive decay in the standard of education. It is perhaps idle at the present day to hope that a moderate proportion of the youth of the country should have an opportunity of becoming familiar with the humane cultures of antiquity. But there are grounds for dismay when we find young people not only void of the classics but, by their ignorance of modern continental languages, cut off from the life and culture of Europe. If there can be degrees of insularity, we in Ireland, an island beyond an island, possess the quality in an extreme proportion. There is need for all the broadening that can be derived from the processes of education. And, whatever the theorist may say, the man in the street values sheer utility. But we find that the modern school-boy who cannot translate the Latin inscription on a public monument is also unable to read the directions given with a French wireless set.

Now this state of affairs, in as far as it is the result of conscious effort, is the work of reformers and improvers. However we may be disappointed with the boy who has little Latin and no French, the educational experts would no doubt be able to show us that he is improved in some other way. Mr. Williams holds that the improvement is not in the direction of scientific training, and there will be general agreement with his view. Experience of the heuristic method as employed in this country shows that, while it blunted the appreciation of students who were later to pursue scientific work, it left to those who had no further contact with science little but a memory of futile dabbling.

When the maturing of the Shannon Scheme brings electricity into the daily life and experience of a multitude of people and leads to its application to a variety of industrial processes, the demand for instruction that will arise should produce reactions not only in the secondary and technical schools, but in all scientific teaching in this country. We need not discuss the higher technical side ; it is more to the point at the moment to consider the elementary aspect of the teaching of electricity.

Electricity usually forms only the concluding part of a course covering all branches of physics. In the ordinary elementary treatment of the subject certain broad principles, as applied to electricity at rest and to steady electric currents, are established in a logical and coherent way. The student becomes familiar with a certain amount of electrical apparatus of a simple type. But the treatment usually stops short about the point where dynamos and electric motors are encountered, and nothing at all is learnt about alternating current. Now it is hardly necessary to point out that, from the practical point of view, a knowledge of this branch of electricity is of the greatest importance. Such enterprises as the Shannon Scheme depend, to a large degree, for their success on just those points in which alternating current differs from direct. The Irish citizen of the future will be taking advantage of the ease of transformation and distribution of alternating current, and it is but right that he should know something of what it is and what it can do. If he has ever had a course of elementary electricity of the present type, he will find that what he can remember of his manipulation of cells and galvanometers will not be of much assistance to him. While the principles remain the same, their application is not so simple and the practical aspect presented is very different. But it may very well be doubted if the average pupil of to-day succeeds in carrying away and retaining for any time even the rudimentary principles of the subject. This results partly from a genuine difficulty or rather novelty in the ideas involved, and partly from the mode of presentation.

With the increasing intrusion of electricity into normal human experience it is, I think, inevitable that the phenomena of alternating current should be dealt with in the school courses in elementary science. From the nature of the subject it is clear that the treatment must be frankly didactic, and that a reasoned and logical presentation cannot be attempted. Alternating current electricity and heurism of the Armstrong type could hardly co-exist in the schools.

It is reasonable then to hope that we may have a type of science teaching which, abandoning the pseudo-research attitude, will seek by the aid of ample demonstration to familiarize students with the vitally interesting and important phenomena. The initiation of this type of instruction will not be easy. But just as it is the duty of the educational authorities to provide specialized training of all grades (an aspect which I have not here considered), so that the country may derive the fullest advantages from the

circumstances of the coming years, so it should be its aim to impart the greatest possible measure of information and interest to the ordinary citizen.

Mr. Williams's plea for realism in the teaching of science is very apt. Those of us who dislike to see young people leave school ignorant of things other than science in which we think they should be instructed, would like to make a plea for realism all round.

JOHN J. NOLAN.

No. 3—By HUGH RYAN, M.A., D.SC.

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FORTY years ago chemistry was taught in a few of the best secondary colleges by means of lectures which were illustrated by experiments carried out by the teachers themselves. Boys taught in this way had a good knowledge of elementary theoretical chemistry, but of course had no practical skill. In most of the schools no experiments were made by the teachers or by the pupils, and the latter acquired therefore only a vague notion of the true nature of chemistry. It was the reaction against this system which led to the adoption of the so-called heuristic method about thirty years ago. In the heuristic method the pupil was required, at least in theory, to construct a chemical science for himself by means of a great many experiments, which consumed a large amount of time at the most valuable period in his whole educational training. This method, which hampered the disciplining and the development of the pupil's mind, has in turn been replaced by another in which lectures illustrated by the teacher's experiments are supplemented by the carrying out of a limited number of experiments by the pupil himself. It would be difficult to devise a better process than this for extracting the maximum educational value from the teaching of chemistry in secondary or technical schools.

On the other hand it is possible that the university training of a chemist may be improved by the introduction of some general technology, more especially mechanical drawing and engineering construction, into his course. This extra study would interfere somewhat with his training in chemistry, but it would enable him to read works' plans easily and to make useful suggestions to an engineer in charge of alterations in a factory.

The two important qualifications for a young chemist who wishes to enter any of the greater chemical factories of Germany are a sound knowledge of pure chemistry and a developed originality of mind. In comparison with these a previously obtained knowledge of the technology of the factory is of small account. The factory will itself provide this in a very short time to any recruit who has a sound knowledge of his science. The real training of a chemist begins in the University. If a student, who enters the university laboratory at the age of eighteen, is to acquire a sound knowledge of chemistry and also to carry out original investigation during a four years course, he must have had his mind well developed by a sound secondary education before he reached the age of eighteen. In my opinion it would be an act of folly to discard subjects such as classics and mathematics from such an education in favour of vocational training in chemical or other experimental science. It matters little whether a student has or has not learned chemistry before entering the University. What is really of importance for his successful training as a chemist is that his mind should have been developed to such an extent as can be attained most simply by a sound course in classical and mathematical studies.

The Shannon Scheme is, as Mr. Williams states, likely to have a marked effect on the future of Irish industries. It will supply cheap motive power to manufacturers. It is unlikely, however, that it can give rise to any great electro-chemical industry. This latter type of industry has usually a world market, and is therefore almost always a large scale industry. Again since the power cost generally forms a very important item in the total cost of an electro-chemical product, moderately cheap power will not suffice. Very cheap power must be available, and this the Shannon Scheme cannot supply on an economical working basis.

HUGH RYAN.

ANCIENT TYRANNY AND MODERN DICTATORSHIP

BY MICHAEL TIERNEY, M.A.

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IT is not surprising that recent events in Greece, Italy, and Spain, and recent tendencies in France, should have led observers to speculate as to their significance for the future of governmental systems generally, and given rise to the question whether there is not something in the character of the ancient Mediterranean nations which prejudices them against Northern forms of democracy. Is there anything in the distant history of these nations which will help to explain the emergence of Pangalos, Mussolini, and de Rivera; any parallel in whose light we can study the ideals and aspirations of these explosive personalities more safely than in their own? It is unquestionable that modern history cannot be fully understood without minute attention to the immediate past. But Fascism has also obviously owed part of its influence to its appeal to ancient Roman precedents, and the present condition of Greece is directly due to the failure of its attempt to reconquer Anatolia. Mussolini talks of *mare nostrum*, and the glories of mediaeval Romania still haunt the new Hellene. When we hear finally that a close understanding (of course denied) has recently been arrived at between the Greek and the Roman dictators, those of us who are familiar with ancient history have our curiosity again aroused. Such an understanding, unheard of since the liberation of Greece and Italy, points to the possibility of developments in the Eastern Mediterranean which may before long attract the undivided attention of Europe. It should be remembered that Greece and Italy have

never been so powerful since the early Middle Ages. The Greece of Philip the Macedonian and the Rome of Scipio and Flamininus, overpopulated, allied, and seeking expansion at the expense of a decaying empire in Western Asia, in a land once the home of a fair Greek civilisation and covered with populous cities, but now backward and in decay—here is a prospect which certainly merits our consideration.

Internally, also, we have an interesting situation in Greece and Italy, and the position of Spain as well as the possibilities of France make it one of more general interest. It is a situation in which limited monarchy, constitutionalism, and government by compromise, which a few years ago seemed destined to a splendid future, are rejected in favour of something very closely resembling the ancient Greek *tyrannis*, the unconstitutional rule of one man. Is this a portent of the approaching revival of the monarchic principle ? It would be ironical indeed, after the Great War had ostensibly shattered autocracy in Europe, to find the hated institution receiving a powerful restorative from the apparent victors ; but of course we all know that there was little real autocracy anywhere before the Great War. The reaction is towards something more substantial than the bogey with which allied propaganda frightened the neutral nations.

It may help us to measure more coolly the possible effects of the reaction, as well as to assess better the aims externally pursued by its artificers, if we examine the significance of its ancient prototype, the part played by the *tyrannis* in the development of Graeco-Roman civilisation, and a further question connected therewith, though the connection is seldom adverted to, the forms under which that civilisation attained its ultimate expression as a world civilisation—its *physis*, as Aristotle would say. Internal and external politics are always intermingled ; and the maze of small and large States which made up the ancient world ultimately found

the same solution for their problems of internal government and external relations. Modern Europe is on the way to some solution, but yet far away from it. Will the solution be on the same lines as in antiquity, and is the new Mediterranean *tyrannis*, taken together with the as yet uncertain movement towards expansion which it brings with it, a symptom of the future? The sober historian may rightly answer that more than ancient precedents are needed for the understanding of present events, and may point to such awkward barriers in the way of historical self-repetition as Yugo-Slavia and the money-market. But the suggestion of parallels with the past is at worst a harmless amusement, and may have some positive value if attempted without too exagger ated a neglect of modern difficulties.

It is of course, from the viewpoint of ancient history, inaccurate to describe the system of government now enjoyed by Greece, Italy, and Spain as a dictatorship. The Roman dictator was strictly speaking a constitutionally appointed officer whose powers were legally limited and defined, and whose tenure was fixed by law. The office had indeed the same origin as had the Greek *tyrannis*, and the difference between them was typical of the general difference between the formal Roman and the empiric Greek. Both originated in the desire to have recourse to monarchy in times of danger to the State; but the Roman thought out this desire, while the Greek genius left its fulfilment to the ambition of individuals and the chances of a crisis.

The Greek *tyrannos* was at first simply the individual who succeeded without legal right in mastering the state by force; the name had no association of "tyranny" in our sense till political philosophers began to resent arbitrary interferences with the scheme of constitutional development as they saw it. Power arbitrarily seized and arbitrarily exercised was the essence of the tyrannis. Its emergence was a historical necessity, only the

Greeks never provided for it, and when their politics came, as they soon did, to be influenced by theorists, they tended, altogether unlike the practical Romans, to ban it under all circumstances. Nevertheless it was a constant element in Greek history in States where there was any movement; there was no Age of Tyrants, because there was no age during which a tyrant was not ruling in one Greek city or another.

The name *tyrannos* itself, while possibly Indo-European, is almost certainly not Greek. We meet it first in the fragments of that turbulent bard, a "tyrannical man" himself in Plato's truest sense, Archilochos of Paros, who probably heard it used in Asia Minor. There, as we know from a writer like the beggar-poet Hipponax of Ephesus, their Greek was full of outlandish words picked up everywhere from a dozen languages. Like the name, the thing was Asiatic; it was in Asia Minor that the Greeks of the eighth and seventh centuries B.C. had monarchy always before their eyes; an institution which there took forms of absolute despotism strange to them, at which they shuddered, but were fascinated in spite of themselves. Even so early as this we can watch the workings of what was perhaps the most amusing complex in the Greek character, their intense love of independence struggling against their equally intense love of mastery over others.

In saying that the tyrannis was a historical necessity to the Greeks, as was the dictatorship to the Romans, we touch upon one of the points where there is an extraordinarily close parallel between their experience and that of modern Europe. In the age when Greece was first rising to be the economical and cultural centre of the world, that very rise brought with it political complications. Early Greece, before Homer's day, had the kingship like the rest of the world; but we do not know clearly what its nature was; we can only surmise that in spite of Knossos and its priest-kings, and in spite

of the huge fortresses of Mycenaean Greece, it resembled more the war-leadership of the Celts and Germans than the theocratic despotism of the Egyptians and Semites. The whole tendency was at any rate towards limitation of it; in more backward districts like Thessaly an aristocracy of "horse-taming" landowners took its place and held a position of leadership till the Persian Wars. In other centres, however, where manufacturing industries such as pottery and textiles began to grow and commercial activity accompanied them, the kingship indeed disappeared at an early date, but the development thereafter was not so simple.

The disappearance of the kingship was effected, as in modern constitutional countries, by gradually limiting the king's powers while retaining the name, so that the old hieratic term, *Basileus*, was applied here to a yearly chief magistrate, there to an officer whose position might be hereditary but whose functions were simply religious or confined to some unimportant judicial matters. Real power was more and more gathered into the hands of property owners, whether of land or capital; in Ionia and in the states about the Isthmus of Corinth there developed a mercantile aristocracy, ruling by virtue of the possession of a new thing, money. Magistrates with new names like *archon* (ruler) and *prytanis* (president) would be appointed at intervals side by side with the old kings, but power left the hands of the state authorities and went more and more into those of the rich.

As this type of plutocracy, or to give it its Greek euphemistic name timocracy, intensified in industrial states, it created conditions analogous to our modern "class wars." "Potter was angry with potter, and craftsman with craftsman." There was keen competition everywhere, which even the growing organisation of emigrants into large colonies did not do much to abate. In nearly every city there was smothered war,

a constant state of *stasis*. The privileged classes held fast to their privileges, the workers and peasants struggled against laws that grew ever more stringent. In many cities, especially where a foreign war came in, as it often did, to complicate matters, there was during the seventh century B.C. a recurrence of such a state of affairs as Mussolini had to deal with in post-war Italy. Various solutions were found to meet the growing inadequacy of political systems to economic needs. Sometimes a legal dictator was appointed, like the *aisymnetes*, Pittakos of Mitylene. More often chance brought the solvent in the person of a *tyrannos* whose coming was generally welcomed, though he often had to fight for his own hand at first. The setting up of a new central power, concentrated in one man's hands, gave cities like Miletus, Athens, Corinth, Sikyon, and Megara, a long period of internal order, during which they had time to work out a fair system of law and to use their surplus population in profitable expansion everseas. All these states colonised vigorously and methodically under the rule of their tyrants.

The old political machinery meanwhile went on unchanged; the tyrants seldom interfered with it, and generally arrived at a compromise by taking some of the more important of the old offices for themselves or members of their families. In Corinth they apparently took the title *Basileus*, in Athens they nominated themselves or relations as Archons. None of them appears to have used the name *tyrannos* as a title, though if we had evidence enough we might find that it was at first as harmless as *Il Duce*. Generally they came into power—and this was regarded as a forewarning of tyranny in after times—through the support of a legalised bodyguard granted them while yet private citzens. The more we study the circumstances of their arrival, their action when in power, and the effects of their work, the more we are reminded of our modern "dictators." The

social crises, the lack of legitimacy, the anxiety to fit in with established institutions, the concentration on internal order and external expansion, even something analogous to the Black-Shirts—all are there in the sixth century B.C. The reinforcement of the central power of the state and its concentration in one person would seem to be called for as a rule in presence of a certain set of economic and political circumstances, and to be achieved, when not expressly provided for as it was in Rome, by pretty much the same means at all times and in all places.

Most of the great economic centres of Greece passed through this phase during the sixth century, but it was a phase which in some of them recurred again and again. The Persian conquest of their Anatolian neighbours and kinsmen had of course an immense effect in the cities of old Greece, and their success in repelling the further Persian attempt to conquer themselves is in reality the governing event of their greatest century—the fifth. Before that came, a reaction against the rule of tyrants had set in at Athens, and the attempt of the expelled tyrant to get back by Persian aid consolidated the democracy which succeeded to him. The Athenian Empire set the fashion of democracy everywhere, and it looked to the contemporaries of Pericles, as it still looks to historians who refuse to read of what came afterwards, as if democracy of some kind or other was the only form of government with a future.

It should be remembered of course that there were enormous differences between this democracy and ours. In the first place it was direct democracy, not an oligarchy of elected representatives or rather of those whom elected representatives select. The Athenians decided everything in an assembly in which all citizens met, and when they wanted a Senate or officials they generally selected them by lot—a mode of procedure not likely to commend itself to reformers of our own Senate or Civil Service. In the second place there went with this

direct rule of the people the most unreserved attribution of power to the State—so much so that a poet like Aeschylus could write a noble play in which he makes the State supreme *moral* arbiter—and a tendency to make the State more and more the instrument of the classes which held no property. While in many ways quite different from the ideal of the modern State Socialist, the Athenian democracy had certainly something very nearly approaching a dictatorship of the proletariat. A third thing to remember about it is that its whole history was a proof of the phrase put by Thucydides into the mouth of one of its leaders—"a democracy is by nature incapable of Empire." The Peloponnesian War was a test under which the Athenian idea of government failed, and that not through the fault of external circumstances, but because of vices inherent in itself.

In this Thucydidean phrase we touch upon another point at which Greek experience has perhaps a curious lesson for us. The problem which was an internal problem for the Greek City-State in the sixth century became an external problem, a problem of national unity, in the fifth and fourth. For the City-State it was adequately solved by the tyrannis, though this in itself proved unstable and gave way to various kinds of democracy. For the Greek nation it was only solved after a long period of struggle and uncertainty, during which no one saw whither events were tending, and it was solved by agencies only half-Greek, like the ancient source of the tyrannis. Its solvent was the Macedonian monarchy, its solution autocracy, a tyrannis made permanent and extended to cover the whole world, a new system under which one man was master and lord of all things, and that man a god. Democracy had shown itself incapable of empire; when the problem of expansion which had confronted individual cities began to confront the whole Greek nation, now consciously one, it had to fall back again on the old remedy, extended and with many new elements

added to it, notably the worship of the monarch. In this development from one form of monarchy to another we get the true picture of Hellenic evolution, in which the Athenian democracy is only an interlude. The Hellenic world found its *physis*, its ultimate self-expression, in the monarchy of Alexander and finally in the autocracy of the Caesars, which was the monarchy of Alexander over again. Under that form of Government the Hellenic genius was to guard the relics of ancient civilisation till the Renaissance. It was a form astonishingly stable, perhaps the most stable the world has ever seen. For Greece its arrival was accompanied by the conquest of her ancient enemy in the East and the extension of her civilisation to the Indus. For Rome its coming meant the end of a period of predatory conquest and the beginning of world-organisation under Roman rule.

It is curious to look back on fourth-century Greece from beneath the shadow of Alexander's empire and the Greek-speaking *oecumene* of the third century. No one seems to have foreseen in any real way what was coming. Isocrates was sighing for unity and had the idea of a Greek culture as distinct from language or race ; but he does not seem to have been troubled by the imminent disappearance of city freedom. Plato and Aristotle were both keenly interested in politics, and indeed political speculation had been common since the time of the Sophists, but though both Plato and Aristotle wrote on the ideal state, and Plato himself tried to construct an actual state on a less ideal plane, neither of them paid any attention to the evident bankruptcy of the contemporary Greek system, which Isocrates had seen. Aristotle even witnessed the unification of Greece by Philip and the conquest of Asia ; but the only effects these things seem to have had on him were to allow him to quote the death of Philip as an instance of king-murder, and to assert the superiority of Greeks over barbarians

in an essay on colonisation. In constructing their ideal systems both philosophers have their eyes fixed on balances and medium states; they speak of democracy and of tyranny, but Plato hates both equally, and Aristotle dislikes tyranny at any rate, while adopting the impartial position that there is a form of government suited to each particular people. He does not seem to have any idea that, for an almost immeasurable future, kingship is to be the dominant form for all alike.

After Alexander's conquest we soon get a philosophical attitude clearly defined towards the kingship and the world-monarchy. The Stoic philosophy in particular had much to say to the world-citizenship and its requirements, and in an anonymous tract on kingship dating from the first half of the third century we have an intersting view of the subject. Legitimacy as a basis for kingship is rejected, and only personal capacity is held to give a right to rule; especially is military capacity counted high. The interest of the State is the paramount consideration: "the kingship is the property of the people, not public matters the property of the king." Here is a conception which might be a philosophisation of the *tyrannis*, and is the exact antithesis to the egoism of Louis XIV. In spite of divinity, the principle of ancient autocracy remained fairly constantly this in all times; divinity was in fact only a new device, learned from the semi-divine democratic State, of giving the King a claim on the obedience of his individual subjects. It passed easily over into the consecrated kingship of the Christian emperors.

Thus it is not true to say that what befell the Greek world after Demosthenes was a degeneration to semi-barbarity or that it was seized by an Oriental influence which changed its whole character. The new monarchy was neither the half-barbarian monarchy of the early Macedonians nor was it the immemorial monarchy of

the East, though it had elements from both of these in it. To a large extent it was a continuance of the early *tyrannis*, and the great significance of the early *tyrannis* was that it led up to this systematised and extended form of itself. The history of Rome, too, has the same interplay and repetition of opposing and related political ideas to recount. The old legalised dictatorship was gone before the era of the Punic wars, in which Rome became practically a Hellenistic city. From that time forward she is more and more influenced by Greek ideas, and we find attempts at the establishment of the *tyrannis* occurring regularly from the time of Tiberius Gracchus downwards. Finally, Caesar succeeds in uniting the world under his own rule as a Hellenistic monarch, and though his death and the temperament of Augustus delayed the process, the Roman Empire inevitably assumed the aspect which that of Alexander had traced for it. So, from the Greek tyrannis there gradually evolved through the centuries the mediaeval empire and much that was characteristic in the now effete monarchy of recent times.

Are we passing nowadays through the beginnings of a new phase which will restore monarchy as a living principle of politics, and give us a new groundwork for the much-talked-of and much-needed confederation of Europe? Our economists as well as our political philosophers see much that is regrettable in the centrifugal tendencies let loose by the Treaty of Versailles. Is there a distant possibility that the striking parallel which exists between the old tyrannis and the new dictatorship may be carried a step further in the coming years, and that a new and willingly accepted Empire of Europe may bring order to the present chaos of opposing customs barriers and hostile States?

M. Tierney.

JEROME AND JEAN THARAUD

BY VIRGINIA M. CRAWFORD

THERE is a beguiling mystery about authors who compose in couples—the brothers Rosny, Besant and Rice, Erckmann-Chatrian, the storytellers of our youth, and now the frères Tharaud, Jérome and Jean. How do they divide their literary labours ? Do both write in close consultation, or does one undertake the planning out and the research and the other weave the material into the finished whole ? An occasional collaboration over a play, for instance, is understandable enough, but a life-long partnership in which the identity of each writer is successfully hidden in that of the other raises a variety of intriguing questions. So, of the brothers Tharaud, all we can say here is that the two men really exist, that they travel together—despite the first person singular used to describe their wanderings—and that the outcome of their literary partnership is a series of attractive volumes which fill a special niche in French contemporary literature.

Probably the most distinctive quality of the Tharauds in the eyes of their foreign readers is that, though French, with all the clarity of thought and expression which constitutes the never-failing charm of French writing, their outlook on life is widely international. They have not only travelled but have lived in foreign lands—in Hungary, in Syria, in Northern Africa—and while noting with keen eyes the external features of landscape and city, they have studied with unusual minuteness the customs and religious observances of those among whom they have dwelt, whether Jew or Gentile, Catholic Pole or Moslem Arab. They are amazingly well informed on a great variety of topics, and their knowledge is woven so lightly and skilfully into their narrative that many a reader

may fail to realise how much patient labour has gone to the building up of their vivid pages.

The earliest novels by the brothers that we have come across cause one to assume that a part at least of their childhood was spent in Central France, in those districts of Le Limousin and Périgord which, with their wild hillsides and vast forests, possess many characteristics of their own. In the second story of *La Ville et les Champs* (1907), "Les Hobereaux," perhaps best translated as "The Squireens," we get a rather brutal picture of life in Périgord on the outbreak of the Franco-German war round the episode of a young landowner murdered in a fit of panic and revenge by a suspicious peasantry. The real theme—the life of the *hobereau* class in these remote regions of Central France—is more fully and powerfully treated in a novel published some years later, *La Mâitresse Servante*. Here the domestic situation is that rather familiar one in French fiction, where the mother continues to exercise undue influence over her son, even after marriage (it has been recently treated in rather repulsive fashion by François Mauriac); but the true interest lies in the Tharauds' realistic word-painting of a state of rural society that must surely be passing away. We are shown this rough Limousin peasant-nobility, with all their pride and pretentiousness, their poverty and ignorance, living on their estates in houses half-château, half-farm, hunting the wolf and the wild boar in their forests, eating enormous dinners, and finding their pleasures in night-long gambling and card-playing. The vigorous talent of the writers is obvious enough, but we find little of the charm and mellowness of their later writing.

Superficially the Tharauds may be read and enjoyed merely as observant travellers possessed of a charming descriptive faculty, but if one regards their work as a whole one sees that the underlying motive of nearly all of it is a passionate interest in race and religion, *i.e.*,

in Mahommedanism among the Arabs and in the Jewish faith wherever it may be met with. From this point of view their travel books divide themselves naturally into three groups. There are the Polish-Hungarian books —*Un Royaume de Dieu, L'Ombre de la Croix,* and *Quand Israel est Roi,* which deal wholly with Jewish life and aspirations in Central Europe. Then there are five or six volumes treating of Morocco and Algiers which are mainly studies of Arab life in its relations to France, and finally the quite recent Syrian and Palestinian volumes— *Le Chemin de Damas* and *L'An Prochain à Jerusalem*— which combine the two themes, although the preponderating interest is the Jewish one. These three categories are each deserving of separate notice.

The Tharauds' first taste for travelling, comparatively rare in Frenchmen, would appear to be due to the fact that one or other of the brothers, on the conclusion of his long years of study at the Collège Barbe and the celebrated Ecole Normale of the rue d'Ulm in Paris, was nominated (1899) by the then Minister of Instruction to a readership in the French language at the University of Budapest. Here he remained for four years, lecturing on French literature and, in his turn, learning to know and to love the Magyar people, to hate the German element in the Austrian Empire and—as related in one of his latest volumes, *L'An Prochain à Jerusalem*—to be attracted by the mystery and picturesqueness of Jewish life as revealed to him through the familiar talk of some of his Jewish pupils. It must have been during these years that was accumulated the very wide knowledge of Jewish life, in some of its most intimate manifestations, which was needed for the writing of *Un Royaume de Dieu.* Here we have a close study of the remote Polish settlement of Schwarzé Témé, where the Jews live rigidly according to the letter of the law, wearing their greasy caftans and long corkscrew curls, cut off by their customs from all their neighbours, clustered round the synagogue, which

is ruled over by a Miraculous Rabbi, their days divided between the alternating feasts and fasts and the innumerable racial methods of making money out of the ignorant peasantry around them. It is an humorous, yet on the whole kindly, picture of a people quite immeasurably remote from life as we know it, and the most lasting impression one receives is perhaps that of the amazing tenacity of purpose of the Jewish race that survives every adverse circumstance.

The same theme is more attractively treated in *L'Ombre de la Croix*, with the aid of the rather sentimental figure of the little Jewish boy Ruben, who gazes one day upon the gaunt wayside crucifix, from which every faithful Jew should turn away his head in loathing. And the shadow of the cross remains over the boy. Here, too, the interest lies in the very detailed study of Jewish life, this time in a little village of Hungary, with its rigid customs and its interminable ceremonies. Perhaps it is the fate of the women in these strict Jewish communities that shocks one most, of the comely girls whose heads are shaved on their wedding day in order that they may wear the hideous wig of matronhood, and who spend their lives as something apart and inferior, shut out of the exacting life of the synagogue and hardly better than servants in their own homes. So Ruben's mother, the sad-eyed Guitélé, is first married to a man selected by her father whom she has never set eyes on, and is then condemned to lose the companionship of her beloved Ruben without being allowed even to utter a word of protest when his grandfather decides to carry him off to the holy city of Bels, there to be plunged for long years in the study of the sacred Thora. Yet only now and then, declares the author, do the young people break away from the almost intolerable conditions of such a life to join their free, fortune-making co-religionists in New York or London. Of this same holy city, "as dirty, as verminous, as obscure as any village of Galicia, yet shining

in Eastern eyes as a palm-tree in the desert," and of the thousands of Hebrews who throng its narrow streets at pilgrimage times, the Tharauds paint a marvellous word picture. How literally accurate it all is one cannot pretend to say. What they have accomplished is to bring a hitherto unsuspected world in unforgettable vision before their readers.

Twenty years later, in 1920, the brothers found themselves once more in Budapest, and in the interval the Hungarian kingdom had passed through the convulsion of the Great War, followed by the bloody horrors of revolution and counter-revolution. The old half-kindly, half-scornful tolerance of the ubiquitous Jew had become a thing of the past; *Quand Israel est Roi*, the outcome of this second visit, reflects on every page the national changes. Since the war, as we know, propagandist writing in the interests of one's country has become more popular and profitable than a detached regard for truth, and the Tharauds are among the many who have succumbed to the temptation. The book is in effect an anti-revolutionary and anti-semitic pamphlet—hence in part its wide popularity—and the villains of the piece are Count Karolyi and the Jew journalist, Bela Kun, who ruled for a few brief weeks at Budapest in 1919. The writers have no sympathy at all with any national aspirations for a better government than that of the militarist and reactionary régime imposed by the Magyars, or even for the prolonged misery and suffering of the war which drove men to desperate remedies. But undoubtedly the book is a brilliant piece of propaganda writing. An admirable chapter describes the last years of Count Tisza, the part he played in opposing the ultimatum to Serbia, and his final murder. There follows a very skilful sketch of the events that led up to the Austrian *débâcle*, to the abdication of the Emperor Charles and the establishment of republics in Vienna and Budapest. It is in these later chapters that the political bias becomes so obvious as

largely to destroy the permanent value of the work. The narrative breaks off in 1920, but it is no secret that after five years, although the financial power of the Jews, thanks to violent persecution, is still utterly broken, and Israel no longer reigns, Hungary remains far indeed from any settled or satisfactory form of government.

After studying the Jew in mid-Europe, the Tharauds have pursued him to Palestine, and we are shewn yet another phase of that world-wide problem which, to some minds, takes on alarming proportions. To our French writers the Holy Land appeals as the ancient home of the Jewish race far more than as the birthplace of Our Lord, and it is by its Jewish features that they have been engrossed during a recent sojourn of many months. As they say of themselves, wherever they wandered in Jerusalem their steps were sure to bring them back, like those of any old Jew of Bels or Zadagora, to the narrow, tangled streets of the Ghetto. The recent Zionist policy of England, promoted by Earl Balfour, not unnaturally excites their derision. The arrival of steamer-loads of Jews from all parts of Europe, they declare, gave pleasure to nobody, neither to the Arabs, nor to the Christians, nor even to the ancient Jews of the Wailing Place, and in ironic mood they describe the mental attitudes of all these mutually hostile elements in the Holy Land. They have collected much enlightening information concerning the various types of Jewish colonies now scattered throughout Palestine, and are frankly scornful of the effort being made to transform the modern Hebrew into an agriculturist. In their view, the whole experiment is already a failure, or at least on the road to failure, and they opine that when this becomes evident to all, Jewish disillusionment will be turned against England, and the offer of a " national home " by which the race has been beguiled, will be regarded merely as a manœuvre in the aggressive Eastern policy of the British Empire.

To the reader uninterested in these racial problems

it will be a relief to learn that this visit of the brothers to the Near East was productive of another volume, *Le Chemin de Damas*, in which all the writers' descriptive talents can be enjoyed to the full. Syria, for the Frenchman, possesses much of the romance, dating right back to the Crusades, that earlier generations of Englishmen felt towards India, and he cherishes the pleasing patriotic illusion that, in some mysterious way, this Eastern land has been specially allocated by Providence within the rightful sphere of French political and religious influence. Many great French writers—Lamartine, Renan, Gérard de Nerval, Théophile Gautier—have lavished of their best in bringing before their countrymen the beauty and the fascination of the Syrian landscape. In quite recent years, as we know, Maurice Barrès delighted his pagan and shocked his Catholic readers by *Un Jardin sur l'Oronte*, while Henri Bordeaux, in *Yamilé sous les Cèdres*, selects the banks of the Kadischa, below the renowned cedars of Lebanon, as the scene of a romance between an Arab girl and her Christian lover, and thus combines discreetly Eastern voluptuousness with religious discussion. Yet another novelist of to-day, Pierre Benôit in the *Châtelaine du Liban*, interpolates in his vivid descriptions of Beirouth and Aleppo reminiscences of Lady Hester Stanhope and not a little anti-English propaganda.

Thus the Tharauds were not covering fresh ground when they journeyed through Syria three years ago, sometimes on a camel, sometimes on a donkey, and sometimes in a French military aeroplane. This, however, detracts nothing from the charm of these vivid personal impressions, with all the ordinary tiresome travellers' details omitted. For them, as for Barrès, the Orontes has a special charm, while some delightful pages are devoted to " the melodious Hama," set amid water-wheels. They visit Renan's house at Amschit, the " cabane maronite," and write a sympathetic page on its empty desolation. Their eyes are open to all aspects of life in Syria, " this

ancient home of the gods, whose schisms and heresy are the natural blossoming of the soil." No one better than the Tharauds can tread their way amid the bewildering varieties of faith and creed which they encounter on every side. "What variety, what infinite shades," they exclaim, "in the Christian churches of Syria . . . Lord, what patriarchs, what archbishops, what bishops, what ecclesiastics have I not seen! What rites, varied as the sky!" They study the Mahometan sects as minutely as the Christian, and at Antioch and Daphne give themselves up to Greek and pagan reminiscences. Finally they contribute some gently ironic chapters on the post-war policy of England, on her efforts to supplant France, and on the sudden elevation of the Emir Faycal to sovereign honours at Damascus. No lover of travels should miss reading this attractive book.

Algeria, even more than Syria, excites the romantic patriotism of the average Frenchman, and if one can fall in with the widely accepted principle that states are justified in subjugating less civilised nations for their own profit and aggrandisement, then one need see nothing but romance in the history of the gradual penetration of Northern Africa and the Sahara by the French, ever since the first great advance against Abd-el-Kader, headed by the Duc D'Aumale, nearly a century ago. And it has been an enterprise not only rich in brilliant military exploits, but one capable of inspiring the pure poetry of Psichari's *Voyage du Centurion*, and, on the religious side, blessed by the beneficent activities of a Lavigerie and the heroic self-immolation of a Charles de Foucauld. So it is not surprising to find that the Tharaud brothers have extended their wanderings to Northern Africa and that their impressions are recorded in some five or six volumes. Curiously enough, the earliest of these, *La Fête Arabe* (1912), shows no appreciation of the civilising mission of the French in the interior of Algeria. It is, on the contrary, a rather severe indictment of their methods of

"progress." The book, which has the slenderest thread of story, opens with a beguiling picture of the Arab village of Ben Nezouh, with all its picturesqueness and native prosperity, with its wonderful oasis of palm-trees, its intricate irrigation and enchanting verdure—and then, but a few years later, the lamentable results achieved by so-called "missionaries of civilisation," the railway station, the sordid cafés, the unfinished boulevards, the meagre European vegetation produced by ill-directed effort, the corrupt speculators, and worst of all the demoralisation of the native population, the dying-out of all native industry and the over-running of the land by an influx of irresponsible fortune-seekers of Mediterranean origin, Spanish, Italian, Maltese and Greek. Are true French interests—not to mention true Arab and Moslem interests—forwarded by such methods as these, query the authors. Is France building up a great African dominion that will endure, or will she not live to see her "weapons" of civilisation turned against herself?

Such a question might be asked with much greater force to-day when France depends largely for her military supremacy in Europe on a vast army of highly trained and fully equipped black troops. But to-day the Tharauds, filled with post-war ambitions for their country, would not dream of putting the question. This change in their attitude towards colonial problems is best realised by turning from *La Fête Arabe* to *Marakesch*, one of the latest of the African series. One of the brothers, it appears, was invited to accompany a motor expedition into the Atlas mountains headed by General Lyautey, thanks to whose wisdom and intrepidity, it will be remembered, the interior of Morocco was successfully held throughout the years of the war by the few French troops that could be spared for the job. The party seems to have passed through much of the country south of the Riff, where fighting is going on to-day, and they penetrated to the great mountain fastness of Telouet, where Si Madami

Glaoui, one of the most powerful of the Atlas chieftains, who had thrown in his lot on the French side, entertained them sumptuously. Obviously a book written under such circumstances had to be what General Lyautey intended it to be, a dexterous writing-up of French Moroccan policy, and it suffers somewhat from the limitations imposed by official requirements, yet the experience was one that provided such admirable material for the author's talents that the book can be enjoyed for its own sake. M. Tharaud dwells naturally on the courage and resource and patience of the French, pushing forward their outposts into the wild Atlas mountains as much by subtlety as by valour, and slowly but surely filching from the tribes all their fertile low-lying lands and hemming them in within the snowy uplands where in the end their choice lies between starvation and submission. But he also does full justice to these Berber warriors who, he admits, are fighting against the French with the same valour and resourcefulness as two thousand years ago they fought against the Romans, and who have never been wholly conquered from that day to this. Marakesch itself, a city of Southern Morocco, with its past glories and its crowded palpitating life of to-day, encircled in its mud walls, is described with almost too much elaborate detail; and there is a merciless picture of the Ghetto, more crowded, more dirty, more sordid, we are assured, than any ghetto of Poland or Hungary.

A slighter, but artistically a more attractive example of the Tharauds' interest in Northern Africa is *La Randonnée de Samba Diouf*, the story of a Senegalese negro compelled to enlist during the war in one of the many native battalions sent to Europe. It is written with a charming simplicity and directness of language in keeping with the aim of the writers, which is to reveal the impressions made by European administration and ways of life on the unsophisticated mind of a negro peasant, straight from his native village. And he is shown, as

the introduction says, not as the brutal figure of cheap colonial literature, but as a man with a true, if simple, civilisation behind him, capable of expressing himself in accurate and dignified language. The book reveals once again the very real gift of the Tharauds for a sympathetic comprehension of human mentality, however alien to their own.

There are not a few other books to the credit of these prolific authors, including the inevitable volume of war sketches and a book of historical reconstruction, *La Tragédie de Ravaillac*, somewhat in the vein of Hilaire Belloc, a narrative of the assassination of Henri IV, built up mainly on the murderer's own confession to his judges. This establishes fairly conclusively that Ravaillac was the victim of religious mania and ultimately felt it his duty to murder a heretic ruler. This is borne out by the heroism with which he endured his ghastly sentence. One curious detail is given. Ravaillac arrived at his final mad resolution on the eve of Easter Sunday, and not daring to receive Holy Communion with such a secret on his conscience, he relates that he went to Mass with his mother, and stood close behind her at the altar rails, hoping that, through her, some ray of grace might descend upon his soul.

What space remains to us, however, it is proposed to devote to a series of lengthy articles on "notre cher Péguy," contributed last summer to the *Revue Universelle*. Versatile writers as they are, the Tharauds have given us nothing more attractive, nothing perhaps of greater permanent value, than these illuminating reminiscences of their old fellow-student. To lovers of Péguy's rhythmic prose, of the haunting cadence of his long repetitive poems, and to all who realise something of the loss to France when Péguy fell in battle on the wide open plains of the Marne, this intimate picture of the writer affords very acute delight.

It was when one or other of the Tharaud brothers was

already at the Collège Barbe, a preparatory college for the Ecole Normale, that Péguy arrived there, straight from his military service, and was at once invested with an irresistible prestige in the eyes of his fellow students, who—in accordance with the usual practice in French colleges—had to spend their recreations walking up and down an enclosed courtyard, whose walls had been enlivened by being colour-washed in pink. Into this dismal "cour rose" Péguy brought a vivifying spirit. He was already a Socialist, but his Socialism, Tharaud tells us, was inspired less by Karl Marx than by St. Francis. It was a disposition of the heart, an evangelical conception dating back to his early childhood and to the life he had led in Orleans up to his sixteenth year among grave, sober, hard-working people. This was the class Péguy sprang from and the class he loved. And the writer goes on to argue that through this narrow, toiling, provincial existence Péguy was far nearer to the age-long peasant life of ancient France than to the life of to-day, and that it lay at the root of all his creative work. Yet at the same time he had a passion for antiquity, and his Greek and Latin studies exercised a strong formative influence on his genius. Of modern literature and international culture he knew nothing and cared less. He was French, of the French soil, and he remained convinced all his life that France was the first and the only country in the world.

A later instalment describes with no less charm Péguy's early years in the Quartier Latin and the desperate struggles of himself and his friends to gain a footing in the great world of French letters. The Tharaud brothers were of the group, and shared in the poverty and privations of those early days. These were the years of the Dreyfus agitation, and Péguy, it need hardly be said, was a passionate partisan of Dreyfus. For him the honour of all France was at stake, and with immense satisfaction he acquired a shabby little corner shop, ostensibly for the sale of his own and other Socialist

writings, but also as a centre for propaganda. Here purchasers were rare, but the place was always crowded with students from the Sorbonne and the Ecole Normale, and many a Dreyfusard demonstration was hatched by enthusiastic youths within its narrow, grimy walls.

Considerable light, too, is thrown in these pages on the curious problem of Péguy's religious position. It is well known that this devout client of St. Geneviève and St. Joan, this pilgrim in time of trouble to Notre Dame de Chartres, for whom Pascal's *Pensées* was a book of predilection, never received the Sacraments of the Church. His apparently *farouche* determination to remain outside the Church, in spite of all the sympathies that might have drawn him within, and in spite, too, of his sense of the historical oneness of France with Christian civilisation, was surely largely due to his wife and her relations. He married very young the sister of his college friend, Marcel Baudouin, who had died during his military service and for whom Péguy continued to entertain a passionate and somewhat inexplicable devotion. The Baudouins were free-thinkers of an austere, puritan type, which somehow impressed Péguy's imagination, and it is easy to understand that Madame Péguy, who had insisted on a civil marriage and no baptism for her children, would never have consented to the steps necessary for her husband's reconciliation with the Church. Thus, almost of a necessity, he had to work out for himself the unusual religious attitude of his later years.

We are promised at some future date further instalments of these revealing reminiscences, which will deal with the crowning literary achievement of Péguy's career, the publication of the *Cahiers de la Quinzaine*. It is a pleasure to come for the many readers of Jérome and Jean Tharaud.[1] V. M. CRAWFORD.

[1] Since these lines were written, the Tharauds have published their reminiscences in a volume entitled *Notre Cher Péguy* (Plon, 18 fr.)

RELIGION AND CAPITALISM

BY GEORGE O'BRIEN, D.LITT.

RELIGION AND THE RISE OF CAPITALISM. By R. H. Tawney. (Murray. 1926. 10s. 6d. net).

NATIONAL RESURRECTION. By Eustace Dudley. (Longmans. 1926. 4s.)

IN the science of economics a reaction is in full swing. The unregulated régime of *laissez-faire* came to a head about the middle of last century, since when the historical school has been waging a vigorous campaign on the old classical positions.

Everybody is agreed that mere absence of regulation and control has not succeeded in producing the Utopia that was predicted, and reformers on all sides are seeking for a new social ethic that will take the place of the gospel of unlimited competition. Social reformers have always been divided into those who look to the future and those who look to the past. These divisions are represented to-day, on the one hand, by the socialists, who believe that happiness may be attained by the further growth of the already overgrown State, and, on the other hand, by the historians, who prefer to seek a solution of our present problems by an examination of the past. The study of economic history cannot proceed very far without encountering the question of the part played by religion in the life of other centuries. If the various Churches are capable of being overlooked in an economic survey of the present age, they certainly cannot be ignored in a study of the sixteenth or seventeenth century and still less in a study of the Middle Ages. The very godlessness of economic and political life to-day helps to emphasize by way of contrast the omnipresent activity of the mediaeval Church.

Two fundamental assumptions of the mediaeval mind were that the real business of life to which all other interests must be subordinated is the salvation of the soul, and that a man's economic conduct is to be regulated by the same ethical rules, enforced by the same sanctions, as his conduct in every other department of life. In other words there was no distinction allowed between commercial and private standards of morality; success or expediency were not recognised as a justification of conduct which was ethically reprehensible. The whole structure of society was soaked in religion; economics was but a department of ethics, which was, in its turn, but a department of theology. Obviously such a society is strongly contrasted with the society of today, where business is looked on as a separate department of life to be regulated by its own code, where success is the one criterion of economic rectitude, and where religion is put away on Monday morning until the following Sunday. Every student of history or of economics must necessarily be interested in the transition from the mediaeval to the modern conception of society, because a knowledge of the causes by which that transition was produced may help in discovering the roots of the unrest and unhappiness of the modern world. Every historian who brings this inquiry a step further is entitled to the student's gratitude. That gratitude has now been earned by the authors of the two books placed at the head of this article.

There is one point on which both writers insist which is very important, namely that the fact of a divergence between doctrine and conduct does not condemn as useless a study of the former. The failure to admit this fact has given rise to much unnecessary controversy, and has condemned fine historians such as Mr. G. G. Coulton to dissipate much of their valuable energy on the unprofitable task of pushing open doors. The men of the Middle Ages were not plaster saints; there was

plenty of cruelty, avarice and lust on all sides; many were the usurers and fraudulent dealers who flourished at that time. But, as Mr. Tawney says, that men should have thought as they did is as significant as that they should have acted as they did, and men must be judged by their reach as well as by their grasp. Let it be frankly admitted by Catholics that the high ideals of mediaeval thinkers were frequently violated in real life and that the standards of theory and of practice constantly diverged; the fact remains that the high aims were never discarded, that the pure ideals of the saints were recognised by the sinners even in their violation, and that the problem of moralizing economic life was faced and not abandoned. The existence of an ideal, Father Dudley reminds us, provides the basis for recuperation.

How did this magnificent ideal finally perish? By what steps did the mediaeval conception of a society dominated by religion give way to the modern ideal of a society dominated by competition and greed? These are the questions which Mr. Tawney attempts to answer. The turning point in the transition was the growth of Calvinism, that peculiarly modern variant of Protestantism which, by applauding exclusively the economic virtues, supplied an atmosphere congenial to the growth of a capitalistic competitive spirit. It was in England, where Calvinism took the form of Puritanism, that this tendency developed most fully. Puritanism, which was Calvinism freed of its theocratic element, became the religion of the English middle class and the characteristic creed of the industrial revolution.

The central doctrine of English Puritanism was that good works are a proof of election. Man is predestined to salvation or rejection; how can the individual learn to which destiny he is foredoomed? The Puritan answer was clear and unequivocal: frugality, thrift, industry and prosperity are the sure marks of God's choice. Worldly success became the certain pledge of an eternity

of happiness, and thus, as Mr. Tawney says, "a halo of ethical satisfaction was added to the appeal of economic expediency." Business enterprise was at once the seal of election and the discharge of one's religious duty; to pursue actively and successfully the affairs of one's calling was the supreme object in life. The old barrier between nature and grace had been removed; no longer did men with vocations retire into monasteries or colleges; every man had now a vocation to glorify God by succeeding in business. The interests of business and religion became identical.

From this attitude it was but a small step to *laissez-faire*. Adam Smith, who saw in the harmony between self-interest and the public good the operation of a providential plan, was merely stating in terms of economics what the Puritans had stated in terms of ethics. Obviously these ideas left no room for the control of man's business relations by priest or parson; all interference with individual enterprise was a thwarting of God's providence. By the beginning of the nineteenth century the territory within which religion ruled had contracted; economics had become, as politics had become a couple of centuries earlier, one of the lost provinces of the Churches. The system of spiritually-enforced ethical control of man's economic life had given place to the system of unlimited competition. Catholicism had been replaced by Capitalism.

This is the now familiar historical thesis first put forward by Max Weber. Mr. Tawney has improved upon Weber's handling of the subject in some respects. He pays attention to certain non-religious intellectual movements which Weber ignored, and he distinguishes fully between the different branches of Calvinism. He also lays due weight upon the movements which were taking place in the economic life of the world at the time of the Reformation, especially the great geographical discoveries which revolutionized the direc-

tion and the nature of overseas commerce. Possibly the most original and valuable part of the book is that in which the author describes, from the stores of his unrivalled knowledge of English economic life in the sixteenth and seventeenth centuries, the growth of the new urban industrial England side by side with the development of the different varieties of English Protestantism. In estimating the influence of these events a certain caution is needed, and it is not certain that Mr. Tawney does not exaggerate their importance. It will, of course, not be denied that economic thought can be best studied in the light of economic life, and that any account of the growth of movements in thought or opinion in which no attention is paid to contemporary developments in the realm of action is in danger of becoming misleading and unreal. While, however, the growth of economic opinions must be studied with one eye on the growth of contemporary practice, the two subjects must be most carefully distinguished if confusion of thought is to be avoided. The causes that produced the new economic organization of society were not identical with those that produced the new outlook in opinion. One revolution would have been possible without the other; the two movements were largely independent. To deny this would be to assert that the economic progress of Europe would have been impossible but for the Reformation.

That is not an uncommon opinion among Protestant historians. If the Reformation, they say, was responsible for the evils of capitalist industrialism, it was responsible also for its benefits. If Protestantism has led to materialism, it has also led to material comfort; we must choose between Protestantism with progress and Catholicism with industrial backwardness or decay. This opinion is so frequently expressed that it has become almost a commonplace. Yet it is absolutely and fundamentally untrue.

Is there any reason for believing that, if the Reforma-

tion had never occurred, the great development of modern economic life would not have taken place? Would a Catholic Hargreaves have failed to invent the spinning jenny or a Catholic Watt have failed to observe his tea kettle? Most of the great discoverers and explorers were Catholics, as also were the Fuggers and other pioneers of banking and finance; in every sphere of scientific and industrial discovery Catholics have at all times played a prominent part. The very Middle Ages themselves, that era of obscurantism gone mad, saw in Augsburg and in Florence the foundations of the modern financial structure. There is not a single grain of reason to suppose that, if the Reformation had never taken place, the modern industrial progress of Europe would have been in the slightest degree prevented or retarded.

The Catholic system which had shown itself strong enough to assimilate the Renaissance would have been equally able to assimilate the industrial revolution. The mediaeval teaching on the just price and on usury had developed so as to meet the new conditions of a commercial age, and there is no reason to doubt that the teaching on the rights and duties of property would have shown equal powers of adaptation to the needs of an industrial period. The very flexibility of the Canonist teaching has been scoffed at as a sign of weakness, whereas it is really a sign of strength. The fact that Catholic countries to-day are indistinguishable from their Protestant neighbours in their industrial outlook is no proof that a Catholicism unweakened by the Reformation would not have harmonized industrial progress with the Christian social ethic. It is merely a proof that the poison has spread from the sick to the healthy. Possibly the greatest crime of the Reformers was that they tainted Catholicism with some of the weaknesses of Protestantism.

It is frequently said that Catholicism destroys individualism. If by individualism is meant the selfish seeking of one's own ends without any regard to the welfare

of others, or the belief that the success of one's unaided efforts to acquire wealth and distinction is a sure mark of divine approbation, then the statement is quite true. But, if by individualism is meant a spirit of independence, of initiative, of enterprise, it has no foundation. What Catholicism does is to mould, not to destroy man's individuality. Whether individualism is a good or a bad thing must depend on the quality of the individual. The individualism of a pagan society is different from that of a Christian, of a Protestant country different from that of a Catholic. Catholic individualism is the individualism of men who believe in a future life, who are not materialists, and who are bound by spiritual sanctions to observe justice to their neighbours in the affairs of business. Such an individualism is as healthy and commendable as the individualism of the pagan is dangerous and corrupt. The economic man ceases to be repulsive as soon as he is given a soul.

It was not the modern industrial organization but the modern industrial spirit that was brought into being by the Reformation. That spirit arises from the complete divorce between religion and economics. The modern business man is not particularly vicious or wicked; in many cases he is quite benevolent. What distinguishes him from the mediaeval Christian is that the spiritual and commercial sides of his life are in separate compartments; he leaves his religion behind him on Monday morning. Mr. Tawney is perfectly right in insisting that this unhappy separation was not deliberately intended by the Reformers, who would have been shocked and scandalized if they had foreseen the results of their activities. The utterances of the Reformers, indeed, were a good deal more strict in regard to the need of regulating business by Christian ethics than those of contemporary Catholics. The precepts of the Middle Ages were thundered with a narrowness and a harshness that they had never known before, because they were stated with the emphasis of

a creed that was menaced. Luther, ignorant of the refinements of the later scholastics, was more mediaeval than the mediaevals themselves; he denounced all forms of commerce and trade indiscriminately as creations of the devil; and it is probable that his very conservatism on such matters as usury hastened the disappearance of doctrines which, as stated by him, appeared to sensible people as barbarous survivals of an antiquated age. Here as elsewhere Protestantism exhibited the lack of the power of development which is one of the marks of a living organism; in Protestant hands the only alternatives for the doctrine on usury were immobility or decay.

Calvin no less than Luther aimed at maintaining the religious control of man's economic life. His liberal, if unscientific, attitude towards usury did not indicate that he meant to abandon the claim to moralize society, but merely that the society which he sought to moralize was commercially advanced. Calvinism as it existed in Geneva may have been favourable to the growth of business enterprise, but it placed that enterprise under the yoke of an inquisitorial ecclesiastical discipline. It was only when Calvinism spread to Holland, England and America and escaped from the theocracy of its birthplace that it began to develop those peculiar tenets of the freedom of business affairs from the scrutiny of the church that gave it its special position as the parent of the modern capitalist spirit. Until the end of the seventeenth century British Puritanism strove to restrain economic activity by religious principles; Baxter's *Christian Directory* is a Puritan *summa moralis*.

The rupture, therefore, of the unity of religious and economic life caused by the Reformation was not intentional. It was nevertheless inevitable, because the Reformation shattered the machinery upon which the maintenance of that unity depended. During the Middle Ages the opinions of individual doctors might differ regarding

the application of principles to particular cases, Dominicans and Franciscans might disagree about the legitimacy of *montes pietatis*, and there was plenty of scope for casuistry and even for evasion. But it was at least recognized that there was only one correct teaching on such matters as usury and the just price, if only that doctrine could be correctly ascertained, whereas, after the Reformation, no such universally received doctrine existed any more. In the face of the spectacle of Luther denouncing the simplest commercial transaction as usurious and damnable, of Calvin justifying usury except in cases of peculiar hardship, and of the Catholic Church drawing nice distinctions between usury, interest, rents and the profits of partnership, it is small wonder that business men decided to pursue the most profitable course by minding their own affairs and left the theologians to fight out questions of principle between themselves. The Reformation had destroyed that unity of doctrine without which any effective religious control of everyday action is impossible.

It was not only the unity of doctrine that was destroyed, but also the machinery by which that doctrine was enforced. While Mr. Tawney and Father Dudley evidently appreciate the importance of the confessional in the Catholic system, they scarcely lay sufficient emphasis on the far-reaching results of its abolition. The whole mediaeval system was rendered possible by the fact that, behind the civil power and the ecclesiastical court, there was the direct contact between the individual and his confessor. Mr. Tawney relates how Bellarmine complained of the troublesome and complex problems of economic conduct that pious merchants propounded in the confessional, how the Spanish dealers on the Antwerp Bourse sent their confessor to Paris in order to consult the theologians of the University as to the compatibility of speculative exchange business with the Canon Law, and how Eck was despatched by the Fuggers

to Bologna to satisfy their minds regarding certain commercial transactions in which they were involved. Instances like these show how powerful a control the Church exercised over every department of economic life in an age of faith. The Reformation abolished all this machinery and substituted instead an appeal to the individual conscience. In other words it destroyed the sanctions by which the religious regulation of business life had been enforced. By destroying the sanctions it necessarily destroyed the power of regulation. By repudiating the organization through which Christian principles of conduct had been applied, Protestantism discredited the principles themselves.

These two inherent weaknesses of Protestantism still survive. The Churches other than the Catholic are divided and cannot speak with an united voice, and have no machinery for enforcing their precepts even if they agreed in formulating them. It is this division and lack of sanctions that renders futile all such well-meant attempts to solve the social problem as the so-called Copec and other similar conferences. The spectacle of these helpless and impotent religious bodies has operated to weaken the power of the Catholic Church to enforce a religious social ethic; it would be as difficult for the Catholic Church to re-establish a Christianized economic system even in a Catholic country to-day as it would be for a highly organized trade union to maintain its standards exposed to the unlimited competition of the labour of slaves.

The present wave of reaction against the régime of unrestricted capitalism is, therefore, not proceeding in the direction of religion. It is important that this fact, unpleasant and unpalatable as it must be to Catholics, should be openly recognised. Merely to plead, as Fr. Dudley does in his essay, that a religious reaction is essential for the salvation of Europe is to shut one's eyes to the reality of the situation. He is a bad doctor who

prescribes a remedy which he knows the patient has no intention of applying. The fundamental basis of a religious reaction, such as Fr. Dudley, in common with all Catholics, desires, is absent in the industrial world to-day; the assailants as well as the defenders of the established order are saturated in materialism. It is only voices crying in the wilderness that deny that the attainment of riches is the supreme object of human endeavour and the final criterion of human happiness. The reaction from capitalism is directed not towards religion but towards socialism. It is from one product of the Reformation to the other.

For socialism no less than capitalism is one of the fruits of the Reformation. The secularization of economics which took place in the eighteenth century was preceded by the secularization of politics which took place in the sixteenth; religion was driven out of statecraft just as it afterwards came to be driven out of business. To appeal from capitalism to socialism is to appeal from godless business to the godless State, from one Leviathan to another.

Socialism is to a great extent the natural reaction from the excesses of an unrestricted régime. The same Puritan creed that glorified prosperity despised poverty. If success in the battle of life was the mark of election, failure was the no less certain token of rejection. Poverty ceased to be a misfortune to be pitied and became a failing to be condemned; the poor and less fortunate, as Fr. Dudley puts it, "came to be classified as the products of laziness and vice." Side by side with this new attitude towards poverty there developed a new attitude towards property. In mediaeval times property was regarded as a trust to be used for the benefit of others besides the owner, but in the eighteenth century there grew up the modern Lockian conception of property as an absolute natural right with which no interference by Church or State could be tolerated. No duty of

almsgiving any longer existed, and all the old mediaeval organizations for the relief of poverty had been suppressed at the time of the Reformation No more fertile soil for the growth of socialistic ideas can well be imagined. No relief for the evils of poverty and destitution could be looked for from the Church or from the charity of individuals; the only refuge available was the State. Hence there have grown up in the last hundred years all sorts of schemes for adjusting economic injustice through the machinery of the State. The Reformation had produced capitalism, which in its turn produced socialism.

So it has come to this: there is no remedy proposed for the evils of society other than socialism. The abuses of property are to be remedied by wholesale robbery, and the grievances of the wage earners are to be redressed by transforming them into slaves. Is there no way between the Scylla of godless business and the Charybdis of the godless State? It would seem rather as if there were no way at the present time, and that no way would emerge until man can be induced once more to accept an ethical authority which can speak with a decided and united voice and can impose sanctions for the violation of its precepts. So far we agree with Fr. Dudley, but we cannot share even his moderate and tempered hopefulness as to the proximate advent of such a reaction. Meanwhile, if we are driven to elect between a capitalist and a socialist society, let us at least choose the lesser of the two evils.

Must we, however, make such a clear-cut choice? Is there not some middle course? Capitalism and socialism both represent exaggerations of perfectly healthy tendencies, which must be combined if social stability is to be attained. Just as the stars in their courses are directed by the joint play of centripetal and centrifugal force, so should society be guided by a nice adjustment

between the forces of individualism and of individual abnegation.[1] The extremities of unlimited competition need to be moderated by checks imposed in the interests of the community. In fact at the present time some such adjustment is taking place. Examples are to be found everywhere of State action moderating the ruthless warfare of competitive business; the old capitalist *laissez-faire* régime is nowhere in operation to-day. Care must now be taken that the pendulum does not swing too far in the opposite direction so as to stifle the liberty and paralyse the initiative of the individual. What is needed is a wise observance of that *via media*, that middle course between two extremes, which constituted the virtue of *temperantia* so highly prized by the despised scholastics. Indeed in the attainment of this *via media* may be recognised the peculiar mark of mediaeval society; for it must be remembered that the same Church that condemned the usurer and the engrosser equally condemned the Fratricelli and the Poor Men of Lyons.

George O'Brien.

[1] This harmony is admirably explained by Havelock Ellis in *The Task of Social Hygiene*, pp. 393 et seq.

LIGHT AS A THERAPEUTIC AGENT

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LIGHT as a therapeutic agent has become very prominent in recent years, and the frequent references in the newspapers to the employment of natural and artificial sunlight in the treatment of various diseases have aroused much public interest. At the Editor's request I shall attempt to discuss the subject for the benefit of the general reader.

The luminous bodies in the firmament have always been considered to influence the health and welfare of mankind in some mysterious way. Sun worship has prevailed from the earliest ages, and it is still practised among some Eastern races. It is well known that the moon was supposed to affect insanity—hence the term lunacy, and we are familiar with the expression "to be born under a lucky star."

Although mankind has always recognised the benefits of sunlight, it is only within the past thirty years or so that its curative properties have been studied and scientifically applied in the treatment of disease. In 1893 Finsen of Copenhagen, who was the pioneer of ultra violet therapy, treated lupus by exposing the affected areas of the skin to the sun's rays. He found that the treatment was very prolonged because much of the ultra violet radiation was absorbed by the atmosphere, and there was too much variation in the amount of sunlight. He therefore devised the carbon arc lamp which bears his name. It emitted rich beams of ultra violet radiation which, by ingenious devices, he concentrated on the affected areas of the skin, and he obtained excellent results. The lamp had many drawbacks however. Its current consumption was high, and it was

costly to run. It generated much heat, and it had to be provided with water-cooling devices. The time required for a single treatment of an area about the size of a penny was an hour or more, and improvement was not expected in less than three months. Consequently the expense, time, and labour involved prohibited the more general employment of the treatment, and very few hospitals could afford the initial cost of the equipment or the annual cost of maintenance.

Several modifications of Finsen's lamp followed, particulary that known as the Finsen-Reyn lamp which was devised by Dr. Alex. Reyn, who was Finsen's co-worker and is now his successor at the Finsen Medical Light Institute of Copenhagen. By the use of powerful carbon arc lights, to which he exposed the whole body, Reyn got better results and in a shorter time, in tubercular cases, than he had been able to obtain by local applications. His observations and results have been confirmed by many others.

Natural sunlight has been in vogue as a routine form of treatment in sanatoria and hydropathic establishments in various countries for many years—for example, at Peebles Hydropathic in Great Britain and at Battle Creek in U. S. A. In Europe Dr. Rollier's Institution at Leysin is the most famous, and the most important work has been done there. In the British Isles the low temperature prevailing at most seasons of the year prohibits the use of out-door sun baths. Also the smoke, moisture and other impurities of the atmosphere at low altitudes absorb the ultra violet rays of the sun. The maximum benefits from natural sunlight are obtained at high altitudes where the air is dry, and free from smoke and dust.

Treatment by the natural sunlight within doors is not practicable, because glass cuts out most of the actinic rays. Substitutes are now manufactured which do not stop the ultra violet rays.

Sunlight is essential for plant and animal life. Plants get their food from the soil in the form of mineral matter and from the atmosphere in the form of carbonic acid gas and ammonia, and they change these into the complex substances of which they are themselves composed, such as starch, sugar, and albuminoids. It is through the influence of sunlight on chlorophyl (which is the green colouring matter of plants) that starch is formed in them. Starch is composed of carbon, hydrogen, and oxygen (C_6. H_{10}. O_5.). Plants obtain the hydrogen and oxygen through their roots in the form of water, and they get carbon from the carbonic acid of the air which they absorb through their leaves. The carbonic acid is split up by the chlorophyl under the influence of sunlight into its elements, carbon and oxygen, and by further action of the chlorophyl granules the carbon combines with the hydrogen and oxygen elements absorbed through the roots to form starch, while the oxygen liberated from the carbonic acid returns to the atmosphere.

Animals cannot live on mineral matter—they can subsist only on plants or other animals. Thus we see that without sunlight animal or vegetable life could not exist. Since sunlight is so essential for our existence let us see of what rays it is composed. Sunlight consists of (a) heat rays (b) light rays (c) chemical or actinic rays. The solar spectrum is composed of seven primary colours and every conceivable shade between them arranged in the following order :—violet, indigo, blue, green, yellow, orange, and red. Heat rays preponderate in the red portion of the spectrum, light rays are in the yellow portion, and the chemical or actinic rays are in the violet and ultra violet portions. The effects of exposure to light are due chiefly to the actinic rays. We see these effects daily in the bleaching of clothes and the fading of colours. We have observed them in our own skins, which become freckled and bronzed in summer time. Their effects on plant life have been already mentioned. We are

familiar with the purely chemical action of the actinic rays from the effect of light on a photographic plate whereby the constitution of the silver salt in the film is changed, and in the course of development, by further chemical action, the image is fixed.

The most active radiations in the solar spectrum are at the ultra violet end; beyond it are the X-Rays of Roentgen and the gamma rays of radium, which are the most active forms of radiant energy as yet known.

Light then consists of vibrations or waves in the ether. Some waves are extremely short; others, *e.g.* the wireless waves used in broadcasting, are hundreds of yards or miles in length. The length of a wave is expressed in angstrom units, and it is symbolised by the Greek letter λ. An angstrom unit is the wave length of the softest and least pentrating X-Ray, and it is one ten-thousand-millionth part of a metre. It is possible to measure these minute lengths by passing a beam of X-Rays through crystals of rock salt. The rays are reflected from the atomic planes of the crystals, and for any particular wave length there is a particular angle of incidence which can be read on a scale; by means of this scale the wave length can be accurately measured. A more detailed description of this type of spectroscope would be outside the scope of this article. It will suffice to say that the length of the ultra violet rays which are used in treatment varies from about 4000 to 2000 angstrom units, according to the type of lamp which is employed, and the shortest wave length in the sun's spectrum reaches a little below 3000 A.U. The most efficient ultra violet lamps should emit rays having a length of 2970 A.U. It might on first consideration be thought that the calculation and measurement of these very minute wave lengths are quite superfluous and of little value—as of little importance, for example, as reckoning the value of a fraction of a farthing in its relation to ten thousand million pounds. This is not so, because scientific

values are very definite and precise, and they are specific entities. There is an enormous difference, for instance, in the effects produced by a beam of X-Rays whose wave length is .09 A.U. and a beam whose wave length is .19 A.U.

Artificial electric light and sunlight are very similar. The electric arc lamps of our streets contain more actinic or chemical rays in beams of equal luminosity than the sun, but the incandescent lights in our houses contain a larger proportion of heat rays. The *amount* of ultra violet rays emitted by an arc lamp depends on the materials of which its electrodes are composed. Tungsten electrodes yield the richest ultra violet radiation of the most suitable wave length for therapeutic purposes. Tungsten is a very expensive metal however, but its cost is counterbalanced by the small consumption of electric current and the short time required to administer the requisite dose.

Reference has already been made to the beneficial results obtained in the treatment of lupus and other diseases by the local and general application of natural and artificial sunlight. Its great healing properties were recognised, but its mode of action was not understood. Recent discoveries have helped to solve the mystery, however, for it has been found that rickets, which is a disease due to malnutrition, and frequently caused by unsuitable food and bad hygenic surroundings, can be cured by feeding affected children with food which has been exposed to ultra violet rays. These rays have the remarkable property of forming vitamines in substances which do not already contain them. For instance, if young rats are fed on a diet which does not contain the fat-soluble A vitamine, they rapidly waste and die; but if the diet is treated with ultra violet rays, they survive for a very long period. The benefit of sunlight must be due then to this property of "activating" certain elements in the food and in the living tissues. Cholesterol

is the substance which is activated. It is chemically an alcohol. It abounds in the human skin, and is found universally in the cells of plants and animals.

We can now appreciate the influence of sunlight on nutrition, and more particularly on those diseases in which disordered nutrition, whether it be a predisposing cause or an after-effect, is of so much consequence. " Prevention is better than cure " is an old maxim, and a very easy and pleasant way to put it into practice is to avail to the fullest extent of all the sunlight that comes our way. If we truly appreciated it, Summertime is one of the greatest benefits legislation has conferred on the inhabitants of these islands for generations, because the beneficial effects on the health and well-being of the in-door worker who spends the additional hour-and-a-half in the open air cannot be estimated in terms of cash. Future town planning schemes should provide for wide streets, large windows in houses, and plenty of open spaces to serve as recreation grounds for children. If it is true that the quays are the healthiest part of Dublin, this can be due to nothing but the great distance between the houses on the northern and southern sides of the river, which thus get the full benefit of all the sunshine. It ought not to be necessary to wait until the housing problem is solved to make an effort to improve the health of the little children in our streets as well as the infirm ; the first thing that ought to be done is to open all the enclosed spaces in the city for the benefit of all. A few more parks like St. Stephen's Green would be an ornament and an asset to the city. The equipment of Merrion Strand with facilities for bathing and sunbaths is another project worthy of consideration. The cost would be insignificant compared with the benefits which would accrue from it.

During the warm summer months, when sunlight is abundant, school children should be taught in the open air. Their heads should be protected from the direct

rays of the sun however, because the brain and central nervous system of the white man are very susceptible to the sun's rays, unlike the dark coloured races who are protected by the black pigment in their skin.

That there are fashions in medical treatment as well as in other things cannot be denied, and for the time being heliotherapy is undoubtedly the fashion; it has many advocates, lay and professional. Extravagant claims for any new remedy, however popular it may be, can never establish it scientifically; they always damage it. The primary considerations in the administration of any medicament are its quality, its dose, and an accurate knowledge of its effects. The effect is always influenced by the quality and the quantity of the medicament, no matter what it may be, and it takes years of patient study and close observation to assess the true value, and the dangers, of a new remedy. It was many years after Roentgen's discovery that the curative properties of X-Rays were recognised, and it was not until much later, and when damage had been done to operator and patient alike, that their potency became manifest. Indeed in the long history of therapeutics the martyrology of those who devoted themselves to the study and employment of radiation in the eternal conflict with disease is the largest and saddest of all. These experiences should beget prudence, and we must not be foolishly led away by the extravagant claims of new remedies which for the time being are fashionable. The action of ultra violet radiation is not yet sufficiently understood, nor is the technique of its application sufficiently established, to justify its employment as a routine procedure in every conceivable disease. There is no universal remedy for all our ailments under the sun, and not even the sun itself will cure all our maladies.

MAURICE R. J. HAYES.

UNPUBLISHED IRISH POEMS

XXXIV—A Jealous Client

EDITED BY PROFESSOR OSBORN BERGIN, D.LITT.

This poem is by the author of No. XXX. It is apparently a panegyric on Domhnall O Briain, who in 1553 made war upon his brother Donnchadh when the latter accepted the title of Earl, with the right of succession for his son according to English law. Donnchadh died shortly after, and Domhnall ruled as lord of Thomond till 1558, when he and his son Tadhg *an tsuasáin* (cf. No. xxx.) were banished by the Lord Justice, and his nephew Conchobhar, son of Donnchadh, was appointed Earl. He returned from Ulster in 1562, and after considerable fighting was granted part of North Clare in 1564, but the peace between the two parties among the O'Briens was often broken. He died after a lingering illness in 1579. Reference is made in §§3 and 6 to the introduction of English law.

The text is from E. iv. 3 (R.I.A.); it is very corrupt, and the poem is incomplete, as it lacks the requisite *dúnadh*. I have silently corrected obvious misspellings, otherwise giving the MS. readings. In spite of the strict metre the emendations are doubtful in places.

Lochlainn Og O Dálaigh cct.

1. Léigidh dhamh mo Dhomhnall féin,
a éigse[1] Innse saoirNéill,
sul do-cluintir ós aird inn
in gach aird uichtghil d'Eirinn.

2. Siobhlach oirbh[2] as gach ionadh,
ag teacht orm dá uaisleaghadh,
an choimhlingse nár aniogh,[3]
a dhámh ghoirminnse Gaoidheal.

3. In bhar dtíribh féin feasta
anaidh, ní hiúl éigcneasta,
nós na nGallsa ós éigean ann,
léigear[4] dhamhsa mo Dhomhnall.

4. Mithigh dhúin, seachnaidh sinne,
nó bíom coimhdheas cointinne:
fám chuid don Bhrianfhuil a-bháin,[5]
ná hiarraidh truid ná teangmháil.

[1] éigsibh. [2] orraibh. [3] amoigh. [4] léigt*hear*. [5] amháin.

5. Nach diongnainn a dhíol molaidh,
don dáimh doirbh an bharamhail ;
ní díol aor d'aoinneach[1] amháin
an saor, an daoineach dreachnáir.

6. Breath dlighidh gnáthchúirte Gall
ní bheanfaidh díomsa Domhnall ;
fada atá sin 'nar seilbhne,
rém lá ribh[2] ní roinnfimne.

7. Ní thiobhrainn do chléir cheannaigh
mo chliath fhosgaidh fhuairearraigh—
ní gar fáth frithbhéime[3] dhó—
mo sgáth sithghréime i samhló.[4]

8. Fám gheall táille i dtigh n-óla
leam ní fhuiltí ionchóra,
a dhream dán doibheanta dhamh,
fám gheall oireachta is éarlamh.

9. Mo chuan téigle[5] i dtaoibh tráchta,
mo dheór aille fhionnMhárta,
m'fhearann saor, mo choimhéad cruidh—
ní foighéag mo chraobh chnuasaigh.

10. Oram[6] a chliar, ná cuinghidh
mo bhreac sruithgheal saorLuimnigh :
mealltair lé sgéal gach sgoile
m'éan a seabhcaibh Síodhoire.

11. A ró oinigh ar n-agra,[7]
leór d'éigsibh dá ionnarba ;
fáth sgís ar n-eolaisne uaidh,
mo ghrís beoluisne bhiothbhuain.

12. Coill gríbhe na ngleodh nimhe,
nó slad nathrach neimhnighe,[8]
toidheacht[9] don iathsa gan fhios,
d'oireacht[10] d'iarsma na n-éigeas.

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[1] aorduineach [2] libh. [3] sithbhéime. [4] samhra. [5] teilge.
[6] orm. [7] árd abhladh. [8] neangnuidhe. [9] teacht. [10] daoibhsi.

13. Toisg an ainmhidhe allta
téid san leabaidh leoghanta—
beart robhaoise nach réidh[1] d'fhior—
béin[2] fám fhoraoise d'éigean.[3]

14. Cuairt fhaolchon d'fhoghail tréada
láimh ré lucht a gcoimhéada
bhar dtoisg, a chliar, tar Chloinn dTáil,
ag triall fá choill mo chompáin.

15. Lámh i n-aghaidh airmreann n-áith,[4]
nó argain beach brugh bhfionnbhláith,
cur im cheann fám chéidfhear ngráidh,
a dhream[5] dárbh éigean mh'éadáil.

16. A ndiúltadh níorbh eól uaidhe—
tig an t-éigeas aonuaire
's an gnáithfhile doirbh 'na dhiaidh,[6]
tar bhláithfhine soirbh saoirBhriain.[7]

17. Dul i seilbh chosanta a chruidh
ar éigsibh Innse Cobhthaigh,
flaith úr nach séardarsaidh soin,
éagcosmhail dún a dhéanaimh.

18. An troidse do-ním aniogh
lé gach druing don fhóir fhileadh,
troid bathlaigh lé buidhnibh[8] sluaigh,
a shuilbhir athlaimh armruaidh.

19. An tan nach tabhair tú féin
congnamh damh fán dáimh d'aimhréir,
an riamh fád chlú nár chumhgaigh[9];
ní ciall tú do theasargain.

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[1] feidhm. [2] buain. [3] darguin. [4] airmreanna naigh. [5] dháimh.
[6] dhéagh. [7] saorbháidh. [8] bun*adh*. [9] cungadh.

20. Bheith dá laoidhibh[1] i leabhraibh
i ndiaidh mheic mheic[2] Toirdhealbhaigh,
buaine leam ná cogail chruidh
mar gheall don bhogfhuil Bhrianaigh.

Translation

1. Leave to me my own Domhnall, ye poets of the Island of noble Niall, ere I be heard openly in every white-bosomed quarter of Ireland.
2. Moving upon you from every place, telling how I celebrate him, is this rival throng—to-day it is modest—O poetic train of the Gaels' green isle.
3. In your own lands henceforth abide—a hint not unfitting—since the custom of these English must needs be followed, let my own Domhnall be left to me.
4. It is time for me—avoid me! or let us contend fairly: only for my share of Brian's race seek ye no fight nor encounter.
5. That I could not suffice to praise him—that is an ill-natured fancy of the poets; though indeed he is not a mark for one man's censure, that noble, modest-faced leader of multitudes.
6. The lawful sentence of the common court of the English shall not rob me of Domhnall; long has he been in my possession, while I live I will not share him with you.
7. I would not give to purchased poets my sheltering fence against the cold spring —far from him is any ground for a counterstroke—, my shade against the long sunshine on a summer day.
8. For the pledge of my score in the alehouse ye have no right to an equal claim with me, ye folk to whom it is not permitted to meddle with me (?), nor for my pledge of court and patrons.
9. My peaceful haven beside the strand, my cataract in fair March, my free land, my defence of wealth—my fruitful bough is no small twig.
10. Ask not of me, ye poets, my whitestream trout of noble Limerick: the tale of every school lures my bird among the hawks of Siodhoire (?).
11. His excess of generosity being challenged (?), there are poets enough to banish it; my experience of it is a cause of weariness, my embers of live flame everlasting.
12. The destruction of a fierce fighting griffin, or the robbing of a venomous snake is the coming to this land unawares of an assembly of the remnant of the poets.
13. The errand of the wild beast that goes into the lion's den—an act of great folly that is not easy for a man—it is to force your way into my lair.
14. A wolf's visit to plunder a flock in the presence of its keepers is your errand, O poets, across the Children of Tál, striving to ruin my comrade.
15. A hand against keen weapon-points, or the robbing of bees in their smooth fair mansions, to oppose me concerning my first love, O ye who must needs despoil me.
16. Yet he has never been known to refuse them—there comes the poet of a single visit, and after him the surly well-known poet, among the gentle refined kindred of noble Brian.
17. To undertake to defend his wealth against the poets of Cobhthach's Isle, that youthful prince whose treasures never grow old—it is unlikely that we should do this.
18. This fight that I make to-day against every band of the poetic host is the fight of a clown against the ranks of an army, O cheerful, expert, red-weaponed prince.
19. Since thou thyself givest no help in defying the poets, abide still in thy unstraitened fame; there is no sense in rescuing thee.
20. That after the grandson of Toirdhealbhach his poems should remain in books I deem more lasting than the saving of wealth as a pledge for the kindly race of Brian.

Osborn Bergin.

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[1] Biaid do laoidhthibh. [2] ad dhiaigh a mhic.

THE PROBLEM OF THE SAINTS

BY C. C. MARTINDALE, S.J., M.A.

SAINTS sometimes provide a problem—we mean canonised saints, and in consequence, chiefly a practical problem. For the canonisation of a saint is his "publication": a supreme sanction is given to his placarding, so to say. He is not meant to be a secret spiritual loveliness, giving glory, unseen by men, to God, and delight to contemplating angels now, but to ourselves thereafter only. We are meant to make some use of him.

Certain saints seem to be exhibited just as instances of God's triumph in souls. Others become Patron Saints as it were *ex professo*: others are offered to us especially that we may imitate them. The categories sometimes overlap, but should not be confused. Very many ecstatic women saints seem to become no one's patron, and certainly cannot be imitated at least in their ecstasies; our duty towards them seems to be summed up in praising God for them. Other saints are definitely Patrons, like St. Patrick and St. Andrew: but we are sure that no Scot sets himself the task of "imitating" St. Andrew; and St. Patrick presumably is invoked rather than imitated. St. Bernard of Menthon has lately been offered by the Holy See to Alpinists as their Patron: but they are not expected, I suppose, to imitate him save quite in general. But the present Holy Father has definitely assigned St. Francis de Sales as Patron of journalists, very much in the hope that they will imitate at least his spirit. This we can most easily understand, and may the wishes of the Holy Father be attended to by all of us who write! We hold that a Catholic writer, especially a journalist or pamphleteer, has been definitely invited by God's Vicar on earth to

model himself on that Saint, and would be wise to invoke him before writing, and it is a foregone conclusion that he will get a special blessing that he would not get were he to invoke, say, the Saint after whom he is named.

Nothing can be clearer than that the Holy See is to-day setting St. Aloysius Gonzaga and St. Stanislaus Kostka before our younger generation not merely as powerful patrons but as in some sense models. We have then no option. It is a duty to play up to the Pope, and apply in particular his general command. The question is, how best we can do this. We do not intend to insist upon any difficulties in our path, though we shall indicate some of them.

As for St. Stanislaus, we trust we do him no wrong by thinking that he appears in these commanded celebrations somewhat as a companion of St. Aloysius. He is practically unknown outside of his own country, Poland, and of noviciates. It will be a great labour to make even his cheerful face, broad and plump, smiling and with dark dancing eyes, familiar round about us. The outlines of Aloysius are very hard-drawn, documents keep pace with his every step. Stanislaus lived the first fourteen years of his eighteen on the estate of his father, a great noble in the running for the elective kingship. "The bravest of his brothers," said Paul, the eldest, he shared their erratic education. Treated with rigid severity—"worse than the servants"—during the day, he assisted at rowdy dinners at night to which nobles came whose conversation made him sick. But he was no weakling. I picture him along with ponies and a bow : in fields : by rivers. At fourteen he was sent with Paul to Vienna for elegant formation. After a space, the Jesuits lost their house, and the young men had to lodge with a Lutheran, and without supervision. Paul ran wild. The tutor played up to him. Paul bullied the boy ; kicked him over when he knelt to pray ; cut at him with his cane. Stanislaus fell sick : the sneering tutor, scared, sat up with him.

Stanislaus, anguished for the Last Sacraments, for he felt himself dying, was refused by the Lutheran so much as the presence of a priest within the house. He " prayed the more earnestly," and the tutor witnessed the moment when Angels brought to the boy the Blessed Sacrament.

In another vision, of Mary and her Child, Stanislaus heard himself called to leave so sick a society and enter the Society of Jesus. Paul, no kinder to his brother, now convalescent, ordered him out of his sight. Dressed as a peasant, he ran for freedom—to Augsburg, where he had been told Peter Canisius, Provincial of Upper Germany, was living, for the Viennese Jesuits refused him admission to the Society without—impossible condition—his father's leave. All Vienna was in uproar: Paul and the tutor pursued him in a carriage, actually spoke to him, but failed to recognise him. Meanwhile, the classicist students of Vienna were writing epics in hexameters upon him. From Vienna to Augsburg, from Augsburg to Dillingen (some 500 miles in all, at 30 miles a day!); and there Canisius tests him: he puts him to serve in a scullery, and the prince becomes a bootblack. He survives the test, and is sent off, 2,000 miles over the Alps, to Rome. There, exhausted in body, but radiant with joy (as he always was, save during that tragic " tunnel," as we have called it, in Vienna), he died on the Feast of the Assumption, 1568, welcomed, even on the hither-side of heaven's threshold, by Mary, whose happy son he had always so loyally shown himself. One shock had jarred on the bright Roman months—his father was threatening to shut all Jesuit houses in the realm, were Stanislaus not sent back, and Paul was commissioned to fetch him, bound, if need be, hand and foot. But the boy's death was like a Pentecost for Paul: utterly changed, he lived in austere beneficence: he wrote upon his tomb: " I blush not for the Gospel ": and the Church, with exquisite sympathy, has placed Stanislaus's feast on the anniversary of Paul's death.

Aloysius, a member of the fierce Gonzaga clan and weighed down by half-a-dozen coronets, was brought up by his father to be a soldier and took to it kindly, stealing gunpowder to fire off arquebuses (half burning his face off, the first time) and field-pieces, so that his father, lapped in siesta, woke to believe the troops had mutinied . . . They had to beg off their—mascot, shall we say ? the boy was only five !—from his punishment. He too was sent with his brother, but a younger one, to Florence to learn court manners. Thenceforward, his life was all of courts—Florence, Mantua, Madrid, where he was page to Philip's son, Prince of the Asturias. And his accounts show how complete was his equipment—what gilded swords, pomades, scented tooth-pastes, and hats with yards upon yards of tulle upon them ! In the Pitti gardens, along with princesses and puppies, he ran races . . . But in Florence, a place of stranglings, poisonings, desperate extravagance and lusts, he knew he had a choice. He made it, and clinched it by a vow of chastity.

He returned to a space of torment. What was he to make of life ? His one prayer was, in his darkness, " Direct me." In Spain, he perceived that ecclesiastical avenues were closed, for him, with a Cardinal's Hat : the Jesuits, he knew, lived poor and foreswore honours. To them he would go. His father raved ; relatives wept and sneered ; bishops and prelates, friars and parish priests and Jesuits themselves, the Lombard despots, one after the other cajoled, argued, threatened. He held good ; abdicated ; went to Rome. And behold, at 22 he had to be summoned back to settle—he alone, it was recognised, could do so—fierce quarrels among his gorgeous turbulent kinsmen, and having done so, returned to Rome to die. Yet no pathetic " fade-out " of a death ! For he caught plague, having carried the stricken from the streets where they lay, to hospitals and tended the worst cases. And the lad, who had renounced all that

the world might offer, renounced too by anticipation, you may say, the promises of his keen intelligence and his power for managing men, for the sake of Christ in "the least of these His little ones." Not once had he been captured by a cheat; not once narrowed his perspective.

We studied some time ago the iconography of St. Aloysius and regretted its inadequacy, to say the least. Since then we have had the pleasure of finding that the picture representing the Saint in black court clothes is far less unreliable than we had supposed and been told. At any rate Senator Marchese Crispolti has given its history, and though we cannot say it was painted by Paolo Veronese himself, it seems pretty sure that it was made for Aloysius's father just before he entered the Society. It would indeed have been surprising if no such portrait had been made for a family that was extraordinarily determined to have its portraits painted.

Is it then to be thought a real portrait? We think, as much, and as little, as the ecclesiastical effigies of the Saint were portraits. Each side had its formula, within which they sought to provide a likeness. Thus our National Portrait Gallery and our private galleries of almost any fairly old family are full of portraits almost absurdly like St. Aloysius's. They all turned the head and the eyes in that sort of way, and the crop of the hair and the dress between them do the rest. Sir Philip Sidney, for example, is just like Aloysius, and—dare we say—Queen Elizabeth is by no means unlike! But we had noticed for ourselves a real likeness between that portrait and the picture of Marquis Ferrante, in feature, not in pose alone nor style; and, as we said, the Mantuan Gonzagas at any rate were so sedulous in being painted, and the successive personages are so very individual within the type, that we are right, I think, in acknowledging in the "Youth with the Two Swords" a real *conventional portrait* of St. Aloysius.

We need not, then, fear to use it, unless we can invent something truer to evidence, and better.

An element due to the "formula" is, no doubt, that in this portrait Aloysius holds his head up. I think it is certain that he did not do so. This is a feature in tradition that cannot be defied. I do not think he hung it on purpose. He had, with great difficulty, to be stopped hanging it, when he entered his noviciate. All novices are apt to hang their heads, because they are beginning to try to concentrate their thought. Aloysius's concentration was appalling, and dated from boyhood. His was "the prone brow, oppressive with its mind." And if some of the pious prints make him *collapse* into prayer, so, I think, will this portrait, painted to please his father, have made him more of a young warrior than he was.

The conclusion I wish to draw from this is that we may perhaps help "devotion" to this Saint by drawing him in secular attire. It is always difficult to make much, decoratively, out of a cassock, and the Jesuit cloak of those times, with its enormous collar, is so very *muffling* that both Aloysius and Stanislaus look lost within it and like no one in particular. We shall say below that if we want to recommend them to modern

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NOTE.—I think this habit of hanging his head accounts more than anything for the story which, an Italian author says, practically *is* "Aloysius" for a number of people—"he would not look his mother in the face." I have no doubt that, as Fr. Thurston has shown, this is an exaggeration of the statement that he did not "fix his gaze upon his mother." I agree too, that he may have remembered that St. Louis of Toulouse, the Franciscan tertiary, would not look at his mother—it is certain that he had read his "life." It is strange too, that the two young men died at exactly the same age to a day; and I think it was entirely in keeping with St. Aloysius's uncompromising and unimaginative temperament not only to try to *copy* in detail a Saint he liked, but also to take a sweeping resolution, "I never will look at a woman," and then apply it rigidly—"I will therefore not look at my mother"; and I recall of course that it was then bad manners to look at all steadily in the eyes of any person in authority, as St. Ignatius's "Rules for Decorum" prove; but above all, I think the fact is that Aloysius did not look at *anyone* with any fixity, simply because his head went automatically down, and his eyelids fell, partly from choice that had become habit, and partly inevitably. It was not he who announced that he would not look at his mother. Other people said it for him, and I think they began by noticing that he did not look much at anyone or anything, and added, that he did not look *even* at his mother. It remains that they were on very close terms of intimate tenderness with one another.

young men, we shall have to make a selection from their lives, and insist rather on principles than on details: and we think we are quite justified if *ad hoc* we paint them rather as they began than as they ended. If people are to be at all interested in them, they ought to find in them something at least remotely resembling themselves, and not just an ecclesiastical *type*.

From the outset, however, we feel inclined to be defiant on one point. We have been told: "You never will make devotion to St. Aloysius and St. Stanislaus really popular: for how should northerners take really kindly to an Italian and a Pole"? We certainly wish we had the equivalents: but, till we decide to produce a few Saints, we must take what we are offered from abroad. Besides, the question of period comes in. We should think that a northern boy of Elizabeth's time was much less different from his continental fellows than a boy of today would be. It really is too much to ask each country to produce in each period one of every sort of Saint to suit contemporary taste, boyish taste included. But we want not only to put up with "foreign saints," but to use them as a means of inculcating the truth that for a Catholic there *is* no foreigner. "Neither Jew nor Greek: neither Scythian nor barbarian." We are all one in Christ Jesus, and till we realise and act on that we shall not have got far in Christianity, and shall be doing very little *with* Christianity. We ought to be glad that one of our young patrons is a Pole and one an Italian.

We own frankly that the Protestant's idea of a Pole is drawn chiefly from Polish Jews, if he has one at all, which is most improbable; and he thinks of Italians at best as artistic people, and at worst in terms of waiters and ice-cream vendors. He knows nothing whatsoever of the amazing masculinity of the real Italian, his relentless common-sense, his dry humour, his dignity. And in parenthesis, we put in a plea that we should on the whole

set our faces against caricatures of nations other than our own. "Criticism" has come to mean "picking holes in" the thing criticised: and cartoonists always tend to make the thing they draw uglier or more absurd than it is. When, we were asked this very day, have we seen a pamphlet setting carefully forth all the attractive qualities of other nations? But what bales of literature point out their defects. What a comment on human psychology, that love for our own country always tends to express itself in terms of dislike for someone else's! A Catholic, then, it seems to me, must be willing to sacrifice the mocking jest, the derisory drawing, in favour of that charity and co-operation which are so hard to create, let alone maintain. We propose, then, to insist quite obstinately, during this year of bicentenary, that the two Saints we are concerned with were "foreigners," and were better than we are at quite a number of things, and are meant, and able, to help us to improve.

The first thing that these two Saints convince us of is, that they experienced "vocation." Try to describe Stanislaus in terms of running away from a brother who bullied him, or Aloysius of shirking a marquisate or the responsibilities of the "world," and see what a mess you make of the evidence! how you nullify their character! They were simply possessed by the idea of doing the positive thing that God wanted them to do. It may well be that Stanislaus did not reflect much on the sort of future he might expect in the Society: frankly, in some sense Stanislaus strikes me as never having quite grown up, and part of his charm for us elders lies in that, and on that account I expect he may in a different way be more suited to schoolboys, Aloysius to young men, as patron. But though Aloysius, possessed through and through as he was with the sense of God, wanted overwhelmingly just to serve Him, yet he was almost cruelly clear-headed, thought over reforming some relaxed religious order (I confess that he soon recovered from

this gust, as it were, of juvenile ambition), had the foreign missions constantly in his eye, and went off to the Society of which people knew, so far, not much save that it worked extremely hard, expecting nothing in return. And it took his new associates but a very short time to see in him a man who was predestined to be its General.

I know that "vocation" to both priesthood and religious life can legitimately be described almost quite negatively. A not distant controversy was settled in the sense that we might say that a boy "had a vocation" if no obstacle in the way of ordination or of vow was discernible. But we still prefer to find some far more positive indication. As for those two young Saints, they were as positive as possible, and it is a joy to find that young men nowadays can be quite as positive. To Aloysius, it seemed quite insane that he should be asked to waste his time over the cumbrous, inefficient world that was his inheritance. But I do not wish just now to emphasise what these boys left: save when it was forced on them, they did not attend to it. I remember once asking a young man why he wished to be a priest, and he said, simply: "It's a *life*. Nothing else seems to be." Everything else appeared to him, he gruffly said, "just footling." This was not a boyish ardour. He had most of life's gifts, and had been through a university and understood the world. But to him that world was, simply, nowhere, and he had laboriously to turn his mind back to consider it. Those, need we say, who have never experienced any such thing, will say it cannot happen. But it does; and if it happens, and the boy or young man says what seems to him only common-sense in view of it, he is dubbed priggish. Yet he is not. Inexperienced, perhaps: sincere, certainly.

I imagine that one of the things Aloysius must have felt intolerable, was to have to try more or less to say what people around him would understand. The point is, both his father (for example) and he had their points

of view, and they were perfectly different. In a sense, Stanislaus's brother had a point of view: it was not an exalted one, but it did include the notion that Stanislaus, having been sent to Vienna to learn manners and how to play a certain part in life, ought to make the most of it; and quite without blackening Paul's character and behaviour unnecessarily, we can see that he really must have felt annoyed by the boy's preoccupations with quite other things. The case for the worldling has been very charmingly put by M. Henri Ghéon in his "Marvellous History of St. Bernard." Perhaps that play will do not a little to make our generation understand the other point of view too—that of the Called. And if these celebrations tear the veil for many a man, so that he sees that no life, really, is a life unless it be conceived in some measure as a vocation, as a dedicated life, much will have been achieved. Indeed, we think that few phrases are so distressing as: "I found I had no vocation." It is used by those who had thought they were called to priesthood or to religion, and then learn that they were not. So they think that they have *no* calling. They may have an occupation, but vocation, no. Yet without something of the sort, no real energy can be put into life. "Non multum refert hic quid velit: sed quidquid vult, valde vult." "It makes no odds what he wants—what he wants, he *wants*." But a life of fierce lunges after a whole succession of desirables, is like to be dissipated. We would prefer a man who poured a whole torrent of will power into almost anything—even politics—to one who was slack about one thing, or ferocious about a dozen disparate things!

But this concentrated power of will towards "the one believed-in thing" need not make us forget that these Saints had to leave a good deal. I think Stanislaus had much less chance of taking stock of society at large than Aloysius had; for, after all, his education in Poland had been but a country-house affair at its widest: at

Vienna, he saw what one might call University-level of life, but still that was not much. Aloysius on the other hand was doomed from the outside to courts, and after a couple of years at Florence and some more at Madrid, we need not worry about Turin or Mantua! I know that we ought not too much to blacken even those Renaissance courts. Whether or no he read the *Cortigiano* of his fellow-townsman, Baldassare of Castiglione who can tell? But certainly his tutors did: and that delightful book gives a far from unpleasing picture of what the "Compleat Courtier" ought to be. A wise adviser has warned us that part of the denigration of this period must be assigned to Protestant ill-nature. And it is true that Mantua ought not to be regarded as notably vicious. It was insanely extravagant, and Duke Vincent, Aloysius's contemporary, had a mania for theatricals; indeed, it was he and the Gonzaga influence generally that first sent troupes of actors to still half-barbaric France, whence echoes of their excellence reached Elizabeth herself through her ambassador, and Spain. But I think Aloysius took far more after his grim old grandfather, Aloysius Alexander, nicknamed "The Squinter-Limper," so damaged was he by his ceaseless battling, who, as he carved over his own tomb, "never rested while alive," than after his irascible gambler of a sire. But the turbulence of the clan had in no sense run out in his generation; and though he could not intervene to prevent the murder of at least two of his brothers, he did have to appear, after his death, to heal his mother, left stabbed in a Castiglione street, and his sister-in-law Elena, who had the nerve to marry yet another Gonzaga after the assassination of her husband!

Throughout his mental processes you can see that above all he will *not* have "honours," and is so clear about the tyranny of money that he insists that an overwhelming grace is needed if you are to resist its spell. In our language, we may say that he saw clearly that a society based

wholly upon wealth and privilege was incurable. He had not the least intention of deserting the human fellowship ; but, in order to work for it, he knew he had to put himself into a society constructed upon quite different principles, and the moment he did see that—it took long to get the matter plain—he began doggedly to live according to those new principles even before he had extricated himself from the world of false ones.

This, I think, is a second indication. It is becoming more and more a duty for our laymen to conceive of *any* profession as " vocational." May I say exactly what I think ? I doubt whether in a generation or two there will be any " Catholic country " as they say there are now. I think that where Catholics are now in a minority, they will have increased largely in numbers, solidarity, and competence. Where the country has been traditionally Catholic, I think that a separation will have gone far forward between those who are Catholic from knowledge and conviction, and those who have been either because no rival ideas or mental imagery have disturbed them (as in very many country-districts where till yesterday there were no cinemas nor, till the day before yesterday, a cheap press, or even people who could read it) or because those whom they hated were anti-Catholic (as in Poland). There too the Catholic nucleus will have much consolidated itself. But in order so much as to belong to it, what preparation will have been necessary ! What *priests* must the laity not be, what Aloysiuses, thus to abdicate all the attractive plausible false principles of an ever more pagan world !

Take one critical example. Do we not know how doctrines or anyway the practice of artificial birth-restriction are infecting Catholic populations ? We priests rightly inveigh against all such things. But at least we have to show we appreciate the frightful difficulty of the form of control we are asking, in the circumstances in which more than half, we should say, of our population

lives. For every once that we mention that subject, would that we mentioned ten times the duty of all men to join in altering those circumstances. An exhortation will not be enough. We shall have to show intelligence of the facts, and throw all our weight on the side of due organisation. And there is but little chance of any of this apostolate beginning after school. It seems quite necessary that the ideal of service should be firmly planted in quite young boys and girls, and that already they should be being taught to realise the ideal in such small forms of service as they are capable of.

That they did not shirk, is a point that the Holy Father has several times made in both public and private references to the two Saints. We have ourselves been surprised how much he has insisted on the fact that it was in attending to the plague-stricken that Aloysius died. He undertook an absolutely loathsome job, and when he got ill, despite his home-sickness for heaven, foresaw recovery enough at least to vow that he would resume at once his hospital-work. Notice that his superiors gave him leave. They imposed a few restrictions ; but they did not think the ex-marquis and the destined General was too precious a creature to run risks. We get quite sick when we hear of devout mammas —or superioresses, for that matter—who fear to allow girls so much as to touch the realities of service lest they see or hear the least thing that is "unladylike." We get desperate when we reflect on the hundreds of young Catholic men, and then of the workingmen's clubs that languish, and the scores that cannot be created, because it never occurs to these young men or has never been put to them, that they might just as well lend a hand once a fortnight in the gym., or with boxing, or with night classes. How humiliated are we when we read of the Equippes Sociales in France ; of the Jeunesse Catholique of Belgium ; of those lay-religious, the Paolini of Italy ; or the charitable organisation of Germany,

or the sodalities of Hungary! I am sure that in Stanislaus and Aloysius we must see above all a tremendous power of Vocation, a triumphant will to take Sacrifice in one's stride—be almost unconscious of it; but also a will to go towards the high glory, so as also to return to that which was left and bring back gifts thereto.

Yet say what you will, we cannot make these two Saints just in every way "attractive." Stanislaus passed frankly into the realm of the miraculous: and though Aloysius was not the subject of mysterious happenings, or visits of angels, or Communions supernaturally administered, yet indeed he stood familiarly on peaks that the mists of humanity shroud from our very eyes. Aloysius was soaked through and through with prayer. It was not only that he achieved at frightful cost a control of his thoughts that should interest, on the lowest level, any student of psychology, but that God from His side, if we may so speak, shone steadily on his mind and made, after a while, a continuous light within his soul. We have to beware of a reaction that should "naturalise" this Saint, or any Saint. Wise indeed are we to examine all that was in a Saint, from the very configuration of his features up to the acquired contents of his memory, the sources of his imagination, the manifold elements of his consciousness, and all the points of contact with every part of life. But God forbid that we should forget the supreme fact that he *was* a Saint, and that to the incredible love of God for him he responded with a love of an intensity and fidelity that we can only hope some day to contemplate in him, scarcely daring to hope to reproduce it in ourselves. Hence a great part of our celebrations ought to be sheer prayer to St. Stanislaus and St. Aloysius, and we must not be content with thinking about them, or even imitating them after our fashion. The Saints are sources of divine Force: they can transmit it, once we *meet* them, and not merely think *about* them.

C. C. Martindale.

SCIENCE AND MANUFACTURE [1]

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I intend dealing in this paper only with a part of the science of industry, namely that part which is concerned with the operation of science in manufacture. And when I speak of manufacture, I don't mean to restrict the reader's view to the ordinary factory processes, though any illustration I may have to give will necessarily be drawn from these. It really does not matter whether the product you are dealing with is agricultural produce in its many varieties, explosives, dyes, or motor cars; the same scientific principles are fundamental to all.

For purposes of simplicity I shall divide the subject into three parts: control in ordinary routine manufacture, manufacturing development, and fundamental research.

Let us first of all examine the routine of production in any well-organised concern. It is obviously impossible to conduct a manufacture on scientific lines unless one evaluates properly the raw materials employed. The product may be a milk for butter production, a foodstuff for cattle feeding, a manure for fertiliser purposes, a pyrites for sulphuric acid manufacture, a vanadium steel for motor car construction, or a fuel for power purposes. The first essential for the control both of the economics of manufacture and the quality of the final product is a proper assay of the raw material. With that in front of you, you have an idea of what is theoretically possible. I emphasize the words "proper assay of the raw material." I am afraid too many specifications are drawn up on rather rough lines—in parts redundant and in parts miserably incomplete. How many milk specifications contain a clause governing

[1] This article is an abridgement of a paper read before the Chemical Society of University College, Dublin, on April 28, 1926.

bacteriological control? How many fuel specifications give any index of the burning qualities of the fuel as apart from its B.T.U. value? A proper specification of a product ought to tell its own story, true and complete, of the part it plays in the qualities of the final article. Until that is achieved, there is incompleteness of scientific control.

Now the foundation of the scientific control of an established manufacture is the devising of a system of obtaining reliable statistics regarding the different elements that enter into that manufacture. The two primary elements of control are quality and cost of production. As a rule these are inter-related, though a dear process very often may produce a very inferior product. For a statistical survey it is not sufficient to know simply the cost of production; the system should provide a means of analysing this item into its constituents—namely, raw materials, labour, maintenance, supply services, overhead charges, and yield. At the present stage we shall not consider the cost of raw materials, as this item is usually governed by factors outside the technician's control; but we shall keep it in the statistical survey with a view to taking it up when we come to that portion of the paper which deals with manufacturing developments. Neither shall we consider the question of overhead charges, for that is a factor dependent on general factory organisation. Thus the items of cost with which technical control of routine manufacture is concerned are labour charges, maintenance, supply services, and yield. By supply services I mean the power element—water, steam, electricity, and suchlike.

Let us take the first of the main controls, namely, quality. The chief factor to be considered here, apart from value (which we shall presuppose), is uniformity. Probably the most damning feature from the point of view of an assured market is irregularity in quality. Uniformity in quality is primarily dependent on proper

control of the raw materials, but this must be backed up by standardisation of the methods of production. Unless each stage in the process is rigidly and accurately defined, either by making it dependent entirely on automatic machinery or by strict supervision of the human element, standardisation becomes impossible. Now it is the essence of the scientific spirit in manufacture that the technician should so know the qualities of his raw materials and the limitations of the human element that he will be able to lay down the methods of production in such a way that a standard product is as nearly assured as possible. Scientific control is merely rigid attention to these defined factors.

Let us now consider the second factor, namely, cost of production. The items in technical control with which cost of production is concerned are, as already indicated, labour charges, maintenance, supply services, and yield. Routine control simply consists in avoidance of wastage in any of these four items; it is largely a matter of organisation. Thus in an ordinary manufacture running on defined lines the labour charge is usually a question of disposition of labour and of supervision, and need not be considered further beyond saying that it gives also an indication of the efficiency of the labour employed. From the maintenance figure the technician can draw several conclusions.

The first is whether his plant is getting into such a condition that the cost of repairs warrants its being scrapped and replaced by a new unit. The maintenance figure may also indicate whether the plant is unsuitable in design for the work it is called to carry out; it may also indicate the efficiency of the labour employed. It is the controller's duty to assess to what extent each of these factors is responsible. The cost of supply services is to be viewed in two ways, namely, the cost per unit of supply and the total number of units consumed. If the cost per unit is excessive, it points to the necessity of

overhauling the supply services; if the number of units used is excessive, plant adjustment is obviously necessary. The necessity for this adjustment may be due to either imperfect design, faulty conditions of operation, wear and tear, or unsatisfactory labour. Again the responsible factor must be assessed and provided against.

We come now to the last factor in the cost of production, namely, yield, and by yield I do not mean, as is sometimes indicated, time-finished product ratio or unit of output, but the yield based on raw materials used. In this matter of yield it is the object of every properly controlled manufacture to approximate to the theoretically possible; but in every process, whether it be the milling of flower, the conversion of milk into butter, or the manufacture of motor cars, there are certain losses, and it is the science of control to reduce these losses to the minimum. The necessity for this becomes the more imperative the greater the number of operations involved in the production of a given product. Where a number of operations is involved the yield diminishes in geometric progression, so that a moderately high yield at each individual stage may mean a very low overall efficiency. There are in some branches of production certain recoverable losses which are classified as rework, and which by suitable methods of treatment are returned to the main manufacture, but as such treatment entails double handling and a double manufacture, it is clear that an unduly high percentage adds to the cost of production.

Now to the technical mind controlling manufacture there occur certain adjustments which may be made to a plant or to the method of operating it, with a view to improving the quality of the product or decreasing the cost of production. These conclusions are derived from nothing more than an intelligent reading of the tests of the product or the items of the cost sheet. It may be merely a matter of rearrangement of labour, the installing of a motor instead of a steam-engine, the

altering of the meshes of a set of sieves, or the proper lagging of a piece of apparatus. These would be simple improvements demanding no detailed investigation. However, in the control of every manufacture there comes a stage when something more fundamental than this is necessary, where the position calls for a properly planned series of experiments. In other words we arrive at that stage of scientific control to which I have referred as manufacturing development or manufacturing research. But it must be remembered that research and invention will never put on its feet an industry that is technically badly managed. The advantages accruing to discovery can only be realised when there exists a sound technical machine for exploiting these discoveries. I emphasise this point because I think it is one that has particular reference to ourselves.

Manufacturing development means the enquiry into problems the solution of which is not immediately obvious. For this purpose it is as well to get down to specific examples. Let us take the question of power. There are not many examples in this country where the production of power on a large scale is under the direct control of the manufacturer, but there are some. There are other manufactures, like the creameries, where power enters so little into the cost of production as to be more or less a negligible quantity. But where power enters to any considerable extent into the cost of production, and its generation is under immediate control, the economy of its production should be one of the very first items to be examined. One at least ought to know how much of the energy in the fuel is being lost in waste gases or in incomplete combustion or in radiation, and if possible the necessary precautions should be taken. Proper boiler control is not a particularly difficult job, but much money is lost even in what are regarded as enlightened concerns for want of a little scientific management. A concern may even suffer through the use of unsuitable plant.

An instance of this is given in the report of the Dail Commission on the Industrial Resources of Ireland. There the case is quoted of a firm using plant for the generation of steam and getting from its raw material an efficiency only 50 per cent. of what might be rationally expected, because the peat fuel was being burned in a plant designed for the combustion of anthracite coal. This question of proper plant design is a most important one for power production; it is at the root of all the advance that has been made in the utilization of the liquid fuels as sources of energy, and is probably the factor that in the future will have the greatest effect in the conservation of our oil supplies, notwithstanding that some of our American friends seem to think that the production of gasolines by the cracking of heavy oils is the solution.

We shall now consider the question of the yield of final product based on the raw materials put into the process. The question of yield is practically always with the manufacturer, whether he be a farmer looking for his 1,000 gallon cow, a sulphuric acid manufacturer seeking a steady 98 per cent. conversion, or an engineer trying to reduce his proportions of scrap. If the yield is unsatisfactory, there can be only two things wrong. Either the machine is inefficient, or it is not used under the proper conditions. One however must always be on one's guard that whatever changes are made to improve yield are not effected at a disproportionate increase in the cost of production. This is an error into which many young technicians are liable to fall. In the case of the farmer seeking the 1,000 gallon cow, the machine may be inefficient, because the proper conditions of breeding and feeding have not been observed. In the same way, the creamery manager may have inefficient centrifuges, separating too low a proportion of the available fats; the acid manufacturer may have in his plant an unsatisfactory catalyst or incorrect temperatures of opera-

tion. I merely cite these as examples to indicate in a general way how the factor of yield enters into the efficiency of production.

I should like to draw a more specific example from the science of Chemistry where, by attention to the yield principle, a completely new manufacture has been established. Let us take the Haber process for the production of synthetic ammonia. Our text-books tell us that nitrogen and hydrogen combine to form ammonia and that ammonia breaks down to form nitrogen and hydrogen, the amount of the three products in equilibrium depending on conditions of pressure and temperature. Now this was merely a scientific curiosity until about 1911. It had been shown by Nernst that under certain conditions of temperature and pressure the amount of ammonia produced from nitrogen and hydrogen would be a certain percentage of the reacting gases; the velocity of the reaction however, at levels of temperature and pressure which were considered practically possible, was so low as to be of no technical interest. About 1911, however, Haber and Le Rossignol showed that, by the aid of a catalyst and working under conditions of pressure unprecedentedly high, the velocity of the reaction could be speeded up, so that the production of ammonia in satisfactory amounts within a reasonable limit of time became a practical proposition. These laboratory scale experiments were translated into works practice by Bosch of the Badische Anilin & Sodafabrik, and the new synthetic ammonia industry was born in 1914. It made Germany independent of the South American nitrate beds during the war, and furnished her with a sure and sufficient supply of nitric acid. In peace it places her in an unchallenged position in the nitrogen fertilizers industry. I might cite a less spectacular example from the evolution of the Ford car as told by Henry Ford in his autobiography. At one stage of the manufacture is a series of stamping operations, six inch circles of sheet metal being cut out.

These discs formerly went into the scrap heap. On examination it was found that they were just the right size to stamp into radiator caps, but the metal was not thick enough. A double thickness of metal was tried, with the result that they made a cap which tests proved stronger than that made from a single sheet of thicker metal, and a considerable saving in costs followed.

Now let us look at the labour factor in production. The labour cost in any process will depend on several factors, the quality of your labour, the proper disposition of your labour (which we shall call organisation), and the extent to which automatic machinery or labour-saving devices are introduced. A good deal might be said on the quality of your labour, particularly with reference to the effect of technical education on its efficiency, but that is rather beyond the scope of this paper. I shall dwell rather on some recent experiments to improve the efficiency of labour by the application of psychology. Most progressive concerns are now paying a great deal more attention than formerly to the question of fatigue. An operator carrying out a particular operation is watched, and observations are made as to the awkwardness or rhythm of his movements. By the proper placing of the operator in relation to his work and to the various items to be handled, it has been found that efficiency is considerably improved, with a consequent reduction in costs. A particularly good example of the working of this principle may be found at the Highland Park factory of the Ford Motor Company. There is no doubt that the science of psychology is going to play a big part in the scientific control of industry, and it is a sign of the times that an Institute of Industrial Psychology has been already established in England. While the industrialist in England has in many cases been keeping a close eye on maintenance charges without any consideration of their reaction on the other portions of his cost sheets, his Continental and American competitor has

learned the lesson that a clean floor, a little fresh paint, and a well ventilated building mean an increase in efficiency out of all proportion to the extra cost involved.

We have considered the influence of scientific method in improving the cost of production. Let us now consider the influence of scientific control on quality. We may control quality in two ways ; we may develop or improve a desirable characteristic in our product, or we may improve the uniformity of our line of manufacture. Let us take a specific example of the former. In the early days of the manufacture of guncotton the industry had a very chequered history. The product was originally discovered by Schönbein, and its production was subsequently introduced into England at Stowmarket in Sussex. It was recognised on all sides as a most valuable explosive, but a series of disastrous explosions brought about the prohibition of its manufacture. The problem of improving its stability was attacked by Abel, who showed that instability was due to the presence of acidic products and sulphuric esters. By boiling the product with water and by subsequent treatment with alkali it was found possible to improve the stability to such a degree that the manufacture and handling of the material was accompanied by no undue risk. The manufacture of guncotton was placed on a safe basis, and the development of the modern high explosive industry had begun.

How is uniformity in our product to be secured ? No matter how carefully we may control our manufacture, no matter how rigidly we may lay down the conditions to be observed, there come times when things go wrong for no readily ascertainable cause ; it may be the falling off in sensitiveness of a photographic film, the deterioration of a consignment of bacon, the want of stability in an explosive, or off-shade in a batch of dyestuff. It is on an occasion like this that the application of science to manufacture has a chance to prove its worth, and in

my experience some of the most valuable advances in technique have been made as the result of the investigation of such anomalies. What are the reasons for their occurrence and our inability to explain? It is simply our lack of complete knowledge of the scientific principles on which our production is based or a lack of knowledge of the characteristics of our raw materials; there is a gap in our knowledge somewhere, and we are at the mercy of it. There is very often a disposition among manufacturers to accept these bad periods, to ride through, in the certain knowledge derived from past experience that they will work themselves out. This of course is the negation of all progress. In any properly organised industry these problems should be referred for investigation to the scientist; they involve fundamental work and are properly subjects for research of the academic kind. Let me give an illustration.

Before nitroglycerine can be used in the manufacture of explosives there are certain well defined stability tests which it has to pass. Among these is the Abel Heat Test. The Heat Test consists in exposing a strip of paper impregnated with starch and potassium iodide and suitably moistened to the action of fumes from the explosive heated to a specific temperature under defined conditions; the time elapsing before a standard tint is formed on the paper marks the stability of the explosive. For nitroglycerine this should not be less than 10 minutes. Now it was an occasional experience to find that batches of nitroglycerine which had been put through the standard process of manufacture failed to pass this test, although other tests carried out showed that the nitroglycerine had a normal stability. There was of course the usual inter-departmental recrimination; the nitroglycerine manufacturer blamed his raw materials, the department supplying the raw materials blamed the process of manufacture, and there was a regular deluge of theories to account for the anomaly. The problem was referred

back to the laboratory for investigation, and after a prolonged research it was established that the trouble was due to the presence of small amounts of organic matter and of salt in the sodium nitrate used for the manufacture of nitric acid. These produced infinitely small concentrations of chlorinated nitrohydrocarbons in the nitric-acid when the latter was prepared from the nitrate, and these hydrocarbons passed in turn into the nitroglycerine during the process of manufacture. These small traces of foreign bodies were sufficient to affect the heat test but not the stability of nitroglycerine. Once their nature was known, it turned out to be a simple matter to devise means of removing them, and one of the bogies of nitroglycerine manufacturers is now gone for ever

So far I have been dealing with scientific control in normal manufacture. I now turn to a new aspect—namely, radically different methods of producing a well established product. I have shown that the essentials for consolidating manufacture on scientific lines, apart from technical training, are common sense, a logical trend of mind, and a scientific inquisitiveness. For the successful development of fundamentally new methods besides the qualities enumerated, there is another essential, namely, vision or inspiration. Fundamentally new processes may have their origin in two ways; they may be spun from the individual through a combination of genius and experience, or they may receive their impulse from outside sources. In regard to the latter source I would emphasize the necessity for those engaged in industry to read broadly and to keep their scientific interests as wide as possible, so that they may be in the position to make the most of recorded experience. There is no doubt that in this country we lag behind our Continental friends in what they term the intelligence side of industry, and yet in view of the scarcity of capital and of the means for adequate endowment of research it is particularly

necessary in our own case to make the most of the recorded achievements of others.

Now, for the evolution of radically new processes the qualities of mind required are different from those required for the scientific control of production or for merely improving existing methods in an evolutionary manner. There are some fortunate individuals who possess the qualities required in each line, and these are the individuals who control very successful small industries, or who are the pioneers of our larger ones. Examples of latter type are Pirrie and Parsons. But in general the successful development of radically new industries is the product of team work ; the creative mind providing the idea, the inspiration, or the skeleton plan ; the best type of scientific controller altering, adjusting, and rounding off to make the process conform to the limitations of practice. To make a product in a new way is often the least difficult part of the job ; what is required in manufacture is a more economic method than the existing one or a method which possesses other desirable features. We are now in touch with the real research spirit in industry ; it may be either the spirit of invention or the spirit of discovery. It is the parent spirit of our established manufactures, and the one that may lead us into new realms. But let us not be under any delusions about it. Research in industry is usually an expensive child to maintain, often prodigal and singularly thankless, but many of the failures may be traced to unsympathetic handling or lack of understanding ; in its proper environment it undoubtedly pays.

Let me give some examples of modern processes in the production of old products. Those who have followed an advanced course in organic chemistry know of the product pthalic anhydride, which enters so extensively into the manufacture of the alizarin group of dyestuffs. This chemical is produced by the oxidation of naphthalene by strong sulphuric acid in the presence of mercuric

sulphate as catalyst, the sulphuric acid being reduced to sulphur dioxide. The sulphur dioxide is scrubbed and returned to the sulphuric acid plant, where it is converted back into sulphuric acid. The process is what is termed a wet process, and there is a fair amount of wear on the plant owing to the high temperatures to which the sulphuric acid has to be heated to effect the oxidation. Gibbs in America, working on the pure research side, has evolved a process in which, by a proper control of temperatures and oxygen supply, naphthalene vapour is converted into pthalic anhydride by passing it mixed with air over a vanadium oxide catalyst. This method cuts out the undue expenditure on plant upkeep, dispenses with the sulphur dioxide recovery system, and is a much cleaner and neater technical process than the older one. It is being successfully worked by the Dupont Dyestuffs Corporation in America and by the progressive firm of Messrs. Scottish Dyes at Grangemouth, who hold the patent rights. We may put on somewhat the same footing the Petart or Badische process for the manufacture of methyl alcohol from water gas, which is a mixture of carbon monoxide and hydrogen. The development of this process has caused consternation among the wood distillers in America, as by its means methyl alcohol can be produced at a competitive price, thus threatening the whole of the vast capital sunk in the older process.

I shall conclude this part by an example drawn from the manufacture of artificial leather. Those who have read Ramsay's researches on the isolation of the rare gases from the atmosphere will remember the important part played by active charcoal in the fractionation processes. The same material was used in the formation of high vacua in X-Ray work and in the manufacture of gas-masks during the great war. The principle underlying these uses is that certain forms of charcoal, such as that made by roasting cocoanut shells, are capable of absorbing large volumes of gas, the lower the temperature the greater

the volume absorbed. Shortly after the conclusion of the war, a series of patents came out covering the use of active charcoal for the recovery of solvents from air-mixtures containing the same. In the manufacture of cordite, nitrocellulose powder, and in some forms of artificial silk manufacture a considerable amount of solvent, usually a mixture of ether, alcohol or acetone, is malaxated with the raw mass to soften or plasticise it so that it may be pressed into the required shapes in hydraulic presses or extruded from dyes. This solvent has to be dried out in the finishing of the product, and the efficient recovery of it forms a most important part of the economics of production. This recovery was effected in France by the refrigeration of the exhaust gases from the drying stoves; but in America, England, and the Continent it was more generally done by scrubbing the vapours with water or sodium bisulphate solution, or by sulphuric acid, and in the later stages of the war by cresol. The solvents scrubbed out were then recovered from the scrubbing liquor by distillation.

The new proposal was to catch these solvents by passing the exhaust gases from the drying stoves through active charcoal. In the early stages of development the process was put up to me for comment, and I turned it down. I gave as my reasons that I did not consider you could get a sufficiently high concentration of recovered solvent in the active charcoal, and that the bulk of charcoal to be set up and handled to get a satisfactory percentage of recovery would render the process uneconomic. At the time my ideas of the properties of active charcoal were based on the qualities of that made from cocoanut. But rapid advances have been made in the production of active charcoal. Once there was a possible demand on a large scale the whole technique of activated charcoal production underwent a complete metamorphosis, until at the present day it is possible to get active charcoal which will absorb up to 15 per cent. of its weight

of solvent at normal temperatures. The charcoal is packed into a tower, the waste gases lead through, and the run continued till a smell of vapour is noticed in the issuing gases. The stream is then diverted to another tower, steam is blown through the saturated tower and the solvent recovered from the condensed steam, the tower being dried out by air for the next operation. The success of this new vehicle is so great that it is being used in processes in which it has been impossible hitherto to effect any recovery of solvent owing to the extremely low concentrations in which the solvent occurs. Thus in artificial leather manufacture a nitrocellulose plastic containing anything up to 80 per cent. of volatile solvent is pressed on a cloth base and the solvent evaporated off, leaving behind a roll of artificial leather. Hitherto the drying had been so rapid that it was impossible to recover solvent ; but now in America, by means of active charcoal, a large percentage of the vast bulk of solvent used in this manufacture is being trapped. This example has two morals : first, read widely, so that your inspiration may be stimulated ; secondly, never condemn a process rashly. In technical matters, speaking broadly, there is nothing impossible ; all that is lacking is the present existence of technique to do it. Even the law of the conservation of mass is now dead.

While I have stressed the importance of developing new methods of doing old things, we have got to remember that the new methods often involve an improvement in quality. The development in Hungary of the steel roller system of flour milling has had a tragic significance for the Irish milling industry ; for that method not only did all that the old stone mills did, but produced a grade of flour that it was impossible to obtain by the older processes. There is a problem of smaller issue awaiting solution in our dairying industry, that of the production of a dried milk that will give a colloidal solution of the same qualities as that obtained direct from the cow.

Let us hope that this technical problem will be solved in our own country.

Let us now turn to another phase of science in manufacture, namely, that which comprises the production of competitive new raw materials and the development of competitive ways of filling old wants. It covers everything to which we apply the epithet artificial and a good deal else besides. It is lack of attention to this side of industry which is probably as much as anything else responsible for the decline of our manufactures. The safest way to conserve a manufacture is to develop within the industry itself the means of providing new alternative products with most of the functions of the old. However, even in the most progressive concerns this is seldom done, because the production of alternative products usually involves a new technique rather off the lines of the existing manufacture, in fact a new manufacture. Still if one is to hold one's own in a competitive age, one must at least be prepared to adapt oneself to new conditions, and surely the best way to do this is to have in one's organisation the scientific outlook. Let me give some examples.

A big percentage of the mining explosives industry is based on the supply and use of glycerine as a raw material, and what is more natural to find in this properly organised industry than that the consideration of alternative methods for the production of glycerine is a subject of constant investigation? Not only this, but a serious rival to the ordinary accepted methods of explosives manufacture has arisen in recent years in the development of the so called liquid air explosives. These explosives consist roughly of carbon saturated with liquid air, the liquid air being added just before use and the mass being detonated in the ordinary way. The making of this explosive involves a technique off the usual lines, but you can take it that the larger concerns in the explosives industry have taken good care to acquaint them-

selves thoroughly with the manufacture and performances of this possible competitor.

We have another example in the case of nitrocellulose lacquers and enamels. This manufacture is still only in its infancy; but it promises to be a powerful rival to the ordinary paint and varnish trade. One of the principal advantages of the nitrocellulose type is that it is possible to achieve by one or two operations what would in the ordinary lacquers require several operations. Furthermore, it does not depend so much on the factor of skilled labour; by using nitrocellulose lacquers instead of the old spirit varnish, a French polish finish can be achieved with very little effort or training. Here is an example of a new art developed by the scientific mind to meet an old demand, using old raw materials in a new way. It is to be noted that the best English firms in the paint line are not allowing themselves to be forestalled, but are entering with determination into this new industry, which seems destined to monopolise motor body finishing in the future just as it controls a good proportion of it already, particularly in America.

Manufactures such as this may derive their inspiration from the genius of the individual; but it is only by a tremendous amount of research on scientific lines that they can be brought to the stage of an established manufacture. One might draw similar examples from the artificial leather industry, the manufacture of artificial silk, or the margarine industry. With regard to the two last, they are undoubtedly strong competitors in our linen and our butter markets, and are industries which should be firmly organised in this country in order to help us to maintain our hold on the markets now served by our butter and linen. If not, those two great industries may meet with the same fate as our poplin trade. There is of course margarine manufacture carried out in the South of Ireland, but to my mind the scale of production should be considerably extended. There are indications

that in the North the new raw material artificial silk will be absorbed into the linen industry. The whole history of industry, and of our own in particular, shows the necessity of such a precaution. In the same way, if we were to revive our tanning industry, I should consider the production of artificial leather a highly desirable if not a necessary collateral. It has the advantage of being an industry in which we are no worse off for raw material than our neighbours on the other side.

So far I have dealt with the scientific control of industry and with the functioning of applied research in production. Before closing I should like to make a reference to the subject of fundamental research in pure science. It has been truly said that research in applied science may lead to reforms, but research in pure science leads to revolutions in ideas and consequently in industry. Now you cannot achieve success in fundamental research by the same methods as you employ in the applied side. While the economic factor must enter into one's calculations in the problems of applied science, fundamental research demands an absolutely unfettered freedom. Its highest rewards are only given to those who pursue it from the pure love of scientific investigation and an ardent desire to unravel the mysteries of nature. But while I postulate these as fundamentals, it is possible in our own science of chemistry to choose a line which, though primarily pursued from pure love of the subject, holds out prospects of material value to our own people. That orientation I believe to lie in the study of biochemical phenomena.

Our basic industry of farming is essentially biochemical; our biggest manufactures, brewing and distilling, are biochemical. These factors alone should surely be enough to warrant the establishment of a strong biochemical department in University College, Dublin. Our own material welfare would appear to demand it; but I place the proposition on a higher level. I am convinced

that our people, by their very love of the things of nature and their daily contact with the land, will make their biggest contribution to discovery by the study of animate nature. What I term "the blast-furnace outlook," which comes so naturally to our chemical friends on the other side of the Channel on account of the highly industrialised nature of their common mode of life, finds little response in our students here. I would point out that the post-graduate work of our chemical students who have pursued a course outside our shores has almost in every case been tinged with the biochemical strain. The bulk of biochemical investigation carried out abroad and recorded in late years, of which the Cambridge School may be taken as representative, has been done in connection with medical advance. There is a vast untilled field which embraces the mechanism of plant life—how they build up from the simplest of raw materials complicated dyes, wonderful narcotics, various perfumes, all of which no doubt exert a certain function in their metabolism. We know practically nothing of this mechanism, except that it is absolutely different from the brute force methods which the chemical manufacturer uses to attain similar ends. If we only knew how certain leguminous plants are able to extract nitrogen out of the atmosphere and utilise it in building up their own structure, we might be able to produce a technical process that would outvie those processes of Haber or Casale for the production of synthetic ammonia which we so justly acclaim. I would ask for a chance for our youth to investigate this untilled field of research, in which I am sure a natural sympathy with the work will lead, as it always does, to discovery of the greatest importance.

THOMAS J. NOLAN.

CATHOLIC HOSPITALS IN THE UNITED STATES

BY JAMES J. WALSH, M.D., PH.D.

IT has been suggested that we can estimate the social development of a people by the number and character of its hospitals. Supposing that to be true, the contrast between our hospitals of the present day and those of a generation ago—a generation is now somewhat more than fifty years—should be the source of no little complacency. We have vastly increased our hospital facilities; but we have even still more improved hospital conditions, and above all the character of the personnel of the hospitals. Less than a generation ago the poor used to dread very much going to hospitals. Indeed no one ever went to an hospital unless compelled by inevitable conditions to do so. It was practically the same as going to the poor house, and was an open confession that you had no one to care for you. Now even the wealthiest, who can command all sorts of skilled attention in their homes, prefer as a rule to be treated in a hospital mainly because their physicians so much prefer it, but also because they themselves have the feeling that hospital facilities supply the best safeguard against serious complications and the best guarantee of suitable treatment if complications should arise.

Here in the United States the increase in the number of hospitals is very striking. The current number of the *Modern Hospital Year Book*, "the annual reference volume on the building, equipment, organization and maintenance of hospitals and allied institutions," sums up the hospital situation in the United States for the years 1873-1924 in some very interesting tables of comparative statistics. The number of hospitals fifty years

ago was 149; the number in 1924 was 6,762. This represents an increase of nearly 5000 per cent.; but percentages mean very little when they are so large as this. The number of hospital beds fifty years ago was about 35,500; the number now is very nearly 775,000—an increase of over 2000 per cent. The number of our hospitals has increased over forty times during the past fifty years ago, and the number of beds has increased more than twenty times, while our population, which was under forty million in 1873, is now above 105,000,000. We now have a hospital bed for about every 140 of our population, whereas fifty years ago we had but one hospital bed for every 1,150 of the population. Our hospital beds have not increased as fast as our hospitals, and for the very interesting reason that fifty years ago our hospitals were mostly large city hospitals each containing a great many beds—the average bed capacity approaching 250—while hospitals have sprung up in smaller towns and even in rural districts, the average bed capacity of all taken together being only somewhat above 100. Many contain but forty or fifty beds.

These figures for hospitals are quite apart from those for allied institutions which are often included in hospital statistics, and which occur to many people quite naturally as deserving to be reckoned among "the guest houses for the ailing poor," as hospitals according to the etymology of the word signify. The homes for orphan or dependent children, for the aged, the blind, the deaf and the dumb, and for chronic invalids are not included in these statistics. If they were taken, there are 2,000 of them, with a bed capacity of very nearly 250,000.

Of the six thousand and more hospitals in the United States only about 750 are Catholic hospitals, nearly all of which are under the care of Sisterhoods. A few of them are in the hands of male religious. This seems a comparatively small proportion when it is considered that we have some eighteen million Catholics out of a popula-

tion exceeding one hundred and five millions. It means that, while one in six of the population is Catholic, only one in nine of the hospitals is under Catholic direction. But if we compare the number of beds in Catholic and other hospitals, we get quite a different proportion—an excellent example of how statistics, unless carefully weighed and collated, may seem to tell a very different story from what is really true.

A great many of the Sisters' hospitals are the large city hospitals containing hundreds of beds. Here in New York City, for instance, St. Vincent's Hospital, our oldest Catholic hospital, has 450 beds; so also has St. Francis Hospital. Misericordia Hospital has 360 beds, Columbus Hospital with its extension nearly 300, and Seton Hospital 250. There are eighteen Catholic hospitals in Greater New York with a capacity of nearly 4,000 beds, so that the average number of beds is about 225 in each hospital. Nearly the same thing is true in Chicago. Mercy Hospital has some 500 beds, the Alexian Brothers' Hospital has 310, the Columbus Extension Hospital with Columbus Hospital 225, and the eleven Catholic hospitals have an average of 224 beds each. In Philadelphia there are six Catholic hospitals with a total of nearly 1,800 beds, or an average of about 300 to each hospital. In some of the smaller cities the same proportion holds. Mercy Hospital in the city of Pittsburg, with only half a million of inhabitants, has 560 beds; St. Francis Hospital in the same city has 550, while St. John's has over 200. The average number of beds in each Catholic hospital in Pittsburg is actually about 335. St. Vincent's Hospital, Portland, Oregon, has over 450 beds. Providence Hospital, Seattle, has 350. Some smaller places have large hospitals. The world known St. Mary's Hospital, Rochester, where the Mayo brothers perform all their major operations, has over 600 beds in a town of 10,000 inhabitants. Rochester might be considered an exception without any possible

rival in that region; but the comparatively small city of Duluth, in the same state of Minnesota, has another St. Mary's Hospital with 400 beds under the care of the Benedictine Sisters, and Minneapolis has still a third St. Mary's Hospital with 225 beds.

While the Catholic hospitals number only 750 out of 6,700, a great many of the non-Catholic hospitals are comparatively small in size. The average number of beds in all the hospitals is only slightly above 100, while the Catholic hospital average is considerably higher than that. The director general of the American College of Surgeons, one of whose main functions has been the standardization of hospitals, declared not long ago at a banquet of the Catholic Hospital Association that about 50 per cent. of all the bed provision in the general hospitals of the United States and Canada is in the care of Catholic Sisters. They control a great many of the very large hospitals of the country, and it is said that they actually accommodate about four million patients every year.

Catholic hospitals in America are as a rule not very old, and this is particularly true here in the United States. In Spanish and French America they long anticipated the hospitals of the English colonies. The first hospital built on the American continent was established by Cortez in 1524 and endowed by him. It is still standing in the city of Mexico under the general direction of certain Spanish descendants of Cortez. The next of our great American hospitals was the Hôtel Dieu in Quebec. In the territory that is now the United States the first hospital was that of the Sisters of Charity in New Orleans at the beginning of the eighteenth century. Catholic hospitals in the United States began to be established in large numbers shortly after the middle of the nineteenth century, when the immigration from Ireland and Germany sent to this country a great many Catholics.

Some twenty years before the Sisters began the movement to establish their own hospitals, they had

one very interesting experience in this country in the management of a hospital. This occurred in Philadelphia at the old city hospital of Blockley. Cholera came to Philadelphia in the thirties, and a number of patients suffering from the disease were admitted to the wards of Blockley—the alms-house hospital. The nurses took advantage of the situation to strike for higher wages. As it would have been impossible to recruit other nurses while cholera was in the hospital, the Board of Guardians had to yield, and the nurses insisted on receiving in advance their first month's wages under the new rate. They knew that cholera sometimes swept whole wards, carrying away patients and nurses and at times doctors also, and they preferred to collect their wages themselves. Most of them had never had this much money at one time in their lives; so they sent out for whiskey, which was only fifty cents a gallon, to celebrate the event.

The next thing that the Board of Guardians in the hospital heard was that all the nurses were under the influence of liquor, that some of them were lying in the corridors and some on the stairs and some across the beds of the patients and some under the beds. There was no one to care for the inmates in an institution which contained, besides the sick poor of the city, some of the feeble minded, a number of insane, and a large number of old people. In this extremity the president of the Board of Guardians went to Bishop Kenrick of Philadelphia, and asked him if there were not Catholic Sisters who might be secured to take charge of the hospital in the awful crisis in which the city found itself. At that time there were no Sisters in the city of Philadelphia. Bishop Kenrick suggested that the president of the hospital might send a messenger down to Emmitsburg about a hundred miles away. There were no telegraphs in those days, and the only railroad in the country was between Baltimore and Washington, so the messenger was sent down on horseback. The bishop insisted that

the Sisters should be told exactly the condition of affairs at Blockley and then allowed to use their own judgment.

Two hours after the messenger reached Emmitsburg six Sisters on horseback were on the way to Blockley Hospital, knowing that there were several thousand people there who needed to be cared for, that there were hundreds of cholera patients in the hospital, and that all the nurses were drunk. It was not easy to imagine what their feelings were under these circumstances. They knew that they were in for a trying time; but perhaps most of them, knowing the reputation that cholera had in those days, were persuaded that they would be in heaven the following week, and so they were not as worried as they might otherwise have been.

Nutting and Dock in their *History of Nursing*, which is looked upon as particularly authoritative with regard to happenings in the history of hospitals and nursing in the United States, tell the story very succinctly. They declare that "only one short interregnum of peace broke the long and distressing reign of violence, neglect and cruelty in Blockley." This was during the Sisters' régime. They add that when the Sisters arrived, "they took in hand the whole desperate situation, at once restored order, and disseminated about them an atmosphere of tranquillity and quiet energy." The Sisters remained for some months, and this represented the one period of peace and efficiency which Blockley enjoyed until the coming of the trained nurse in 1882.

Nearly a hundred years later Philadelphia once more was to be put under very heavy obligations to the Sisters. When the epidemic of influenza occurred in 1918-19, Philadelphia was one of the localities in the United States that suffered most severely from the disease. There were so many deaths that coffins could not be provided for all the corpses, and the deaths came so thick and fast that graves could not be dug for the bodies. The hospitals were crowded, so that even the corridors were filled

with beds. The armories were opened as additional hospitals and regular and volunteer nurses placed in charge of them. Even with all this it was known that there were a great many people in their homes who were suffering from grippe with no one to care for them. Not infrequently both father and mother would be down with the disease, and children of seven or eight and sometimes only of three or four would be the sole attendants on them. Physicians were so exhausted by their round of visits to patients that they could not possibly see all those who asked for them. A great many people died through sheer neglect of the simplest kind of help.

Under these circumstances once more an official of the city government of Philadelphia, this time the mayor, asked the Archbishop of Philadelphia if the Sisters could not help the community in the grave situation that had arisen. The Archbishop consulted with the superiors of the Sisterhoods, now many in number and with a great many members. The next day the parochial schools of the city were closed, and some 2,000 Sisters went out to do what they could for the influenza patients of Philadelphia. An interesting feature of that incident is that only something like half a dozen of the Sisters who thus went out to the homes of the city, and Philadelphia is a city of homes (over 60 per cent. of the people owning their own houses), suffered from the disease. I believe that in only one case could the death of a Sister be even remotely attributed to the disease.

The principal reason for the very large increase in the number of hospitals since 1872 is the intoduction of Listerism or the principles of the control of bacterial growth which came as the result of Lister's studies. When Lister married Syme's daughter, following the old tradition that curates and assistant professors fall in love with their rector's and director's daughters, his prospective father-in-law expressed regret that Lister was taking up surgery because, while there was a good

living in it, there was no hope of making a name for himself in the profession. All the great operations had been done, and there was now no prospect of the surgeon being able to do more than repeat what his predecessors had done. Syme himself, the leading surgeon of Great Britain at the moment, had no inkling at all that this son-in-law was going to revolutionize surgery and as a consequence change completely the character of hospitals.

Lister became very much interested in Pasteur's work, especially on fermentation, when he fulfilled Horne Tooke's prophecy that the man who would explain fermentation would probably also solve the problem of infectious disease. It was all a question of microbes and their control. Surgeons did not dare to do operations because of the complications which ensued when bacterial invasion took place in the tissues for which their operations were performed. After years of work at the subject, Lister succeeded in making the world understand how much might be accomplished for the saving of life and suffering by the prevention of microbic infection. Practical application of his principles was halting enough, and he found it very difficult to persuade his generation that he had made an important discovery. When by invitation he came to accept the professorship of surgery at London, the president of the London Surgical Society blackballed his application for membership and spoke of him as "that charlatan Lister." But his work made itself felt, and by 1880 the world was waking up to the fact that a great discovery had been made.

When patients no longer had even laudable pus in their wounds, the number of operations performed by surgeons went up much more than by the conventional leaps and bounds. Surgeons now do more than one hundred times as many operations in the year as their colleagues in surgery did sixty years ago. For this increased surgery hospitals were needed, and it is this that has caused the multiplication of hospitals and of beds in them. It is during this period particularly that Sisters'

hospitals have grown very much in numbers. Some of them came to be known as very wonderful hospitals. Most of the surgical work of Dr. John B. Murphy of Chicago was done in Mercy Hospital, Chicago, under the control of the Sisters of Mercy. At Dr. Murphy's death a few years ago, Sir Berkeley Moynihan, the well known English surgeon, declared that Dr. Murphy was probably the best surgeon of the last three hundred years in the light of the work, in many different lines, that he had accomplished so successfully. Dr. Will Mayo of the brilliant Mayo brothers declared that Murphy was the best teacher of surgery in our time, and that his operative demonstrations were among the best surgical lessons ever given. These were given as a rule at Mercy Hospital.

At Mercy Hospital in Pittsburg, owing to the proximity of the great steel mills of the United States Steel Corporation and many other industries, a very large number of operations are done every year with wonderful success. The Sisters have built up a great hospital there that is known all over the United States for the good work accomplished in it, and steel magnates have been very generous in their donations to this hospital because of what it has accomplished for their injured working people. Something similar might be said of other great hospitals in this country that are under the control of Sisters. Some of the best surgery in New England is being done at the Carney Hospital in Boston, and St. Vincent's in New York has from its very inception been looked upon as an institution in which patients got along better than in almost any other hospital in the city. Even the smaller Sisters' hospitals throughout the country have come to be very well known for their thoroughgoing cleanliness, so important for modern successful surgery, and for the development of their laboratory facilities and technical equipment, until even in comparatively small towns excellent diagnostic work has been accomplished without the necessity of referring patients to distant experts or requiring them to go for treatment far from home.

The peerless representative among the Sisters' hospitals in this country is of course St. Mary's in the comparatively little town of Rochester (less than 10,000 people) in Minnesota. This is the great St. Mary's Hospital with 600 beds in which the Mayo brothers do all their wonderful work. It is well known that the Mayos have the feeling that a great part of the success of their work is due to the meticulous care which the Sisters take of their patients. Dr. Will Mayo is reported to have said that, if he had to have a serious surgical operation himself, he would want to be sure that the Sisters were in charge of the operating room and that one of them in particular, who has been present at his operations now for many years, would be there and would be consulted as to details of the operation. St. Mary's, since the erection of its recent magnificent building, must probably be considered the greatest hospital in the world. Medical visitors from all over the world crowd to see it, and take home with them new ideas with regard to the management and efficient direction of hospitals in their own country. During the last twenty-five years Sisters' hospitals have thus come to be leading factors in the hospital movement of the United States.

Of course there are many economic advantages in having the Sisters in charge of hospitals. They occupy responsible positions for which usually substantial salaries have to be paid, and yet they themselves get practically nothing more than their board and clothing and lodging out of the hospital. There are some necessary expenses in connection with the provision of younger members of the order, who in their turn will come to be hospital directors and superintendents and head nurses and the like; but the item of salaries is so different in a Sisters' hospital from what it must necessarily be in a public hospital that it is easy to understand how much more economically a Sisters' hospital is run. All the money that comes into the hospital is used for hospital purposes, and profits that may be made in any department, though

almost needless to say a hospital cannot be run at a profit, are turned back into the hospital itself.

When besides this it is realized that the Sisters provide a self-perpetuating directorate, and that the spirit of the house is maintained without any of the abrupt changes that may occur when there are transfers of authority from one to another board of management, it becomes easy to understand that Sisters' hospitals have become very popular with the medical profession as well as with the public, and that as a rule towns welcome very enthusiastically the establishment of a Sisters' hospital in their midst. Also there is a spirit of thoroughgoing self-sacrifice that is cultivated by the Sisters because of their deeply religious life, and that pervades the hospital and makes itself felt not only among the Sisters themselves but also among all the attendants in the hospital as a rule. There is very little of salaried service and much of human sympathy, with an air of cordial welcome for the poor that sets them thoroughly at ease and makes for that satisfied state of mind in which the best results both for medicine and surgery will be secured. This spirit of self-sacrifice is needed in hospital work. After making a very deep study of hospitals Virchow, the great German scientist of whom it was said that at his death Germany lost not one but four men—a pathologist, an anthropologist, a sanitarian, and a medical historian—emphasized very strongly this aspect of hospital organization. He had much more of a right to an opinion in the matter than would ordinarily be presumed; for he had made very special studies in this subject, and had been commissioned by the German government to work out a plan of hospital organization that would be worthy of the prestige of the Germans as leaders in the medical world in his generation. That story is worth while recalling when there is question of hospital reorganization; but it and the story of some recent developments in American hospitals must be reserved for a further article.

James J. Walsh.

HUMANISM AND MYSTICAL EXPERIENCE

II—The Sense of Divine Presence [1]

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PERHAPS the most striking characteristic of Père Poulain's great treatise on mystical theology [2] is the emphasis he lays on "the presence of God felt" as the critical and decisive symptom of genuine mystical experience. Professor Leuba [3] is quite at one with the great Jesuit writer in recognising the importance of this *sense of presence* :—

> The distinction of the mystics is to have found and practised a way of realizing the divine Presence with as much, nay with more, intensity than if actually present to the external senses. The definition of mysticism as the direct, experiential realization of God is incomplete but not false . . . . Of the different categories of alleged proofs of the existence of a God-Providence, this immediate experience of him is probably the one which has so far suffered least from the introduction of science into the sphere of religion. The many instances of divine Presence contained in Chapter IX. have already shown that the experience means much more than the mere thought of the presence of God. (pp. 280–1).

We find a striking parallel passage in Poulain :—

> In the mystical state God is no longer satisfied with helping us to *think* of Him and to *remember* His presence, but He gives us an experimental intellectual knowledge of this presence . . . . There is a profound difference between *thinking* of a person and *feeling* him near one. When we thus feel someone near us, we may say we have an experimental knowledge of his presence. In ordinary prayer one has only an abstract knowledge of the presence of God (French fifth edition, p. 68 ; English edition, pp. 64–5).

For Poulain this sense of presence is something *given*, and is in his system the grand discriminant of the mystical state. For Leuba it is a formidable fact to be explained

[1] For Part I see September (1925) issue. [2] *Grâces d'Oraison*

[3] *The Psychology of Religious Mysticism* (Kegan Paul. 1925. 15s. net.)

with considerable ingenuity as a mental construction. He summarises his theory as follows (p. 293) :—

Our theory of the Sense of Presence is then, in brief, that the cause of strange impressions (sensations, feelings, emotions) whose origin is not perceived, is, according to a deeply ingrained habit of the human mind, automatically personified, or at least externalized in an Agent, and that the idea of this Agent sets off in the subject reactions which themselves contribute to the formation of the idea of the nature of the Agent and to the certainty of his presence. The production of the phenomenon is much facilitated by a state of trance such as is induced in mystical worship.

When the Presence takes the form of the Christian God, the experience may acquire the incomparable significance and the value which Christians ascribe to his approval and his love.

Leuba takes a very high view of the moral efficacy and utility of such illusions (p. 299) :—

The development of the mystical technique for the realization of a quasi-physical presence of the Perfect One constitutes the most remarkable achievement of religion in man's struggle to overcome adverse external circumstances, his own imperfections, and those of his fellowmen. It is one of the outstanding expressions of the creative power working in humanity. It is paralleled in the realm of reason by the development of science. Both lead, if in different ways, to the physical and spiritual realization of man.

Yet in spite of this glowing testimonial he does not hesitate to write (p. 322) :—

There is neither rashness nor impiety in affirming of mystics such as Suzo, St. Teresa, St. Catherine of Genoa, Mme. Guyon and St. Marguerite Marie, that the best psychotherapy of to-day would have saved them a great deal of physical and spiritual suffering, and that it would have led them along natural ways to an earlier self-fulfilment and to a degree of perfection in no way inferior, ethically or otherwise, to the one which they attained during the active phases of their lives.

One wonders if Professor Leuba is laughing at us when he writes thus : " The best psychothrapy ! " One thinks of the March Hare's retort : " It was the *best* butter," when the Mad Hatter complained of the damage done to his watch by that domestic lubricant.

The term *sense of presence* is in itself equivocal. For Leuba it seems to import a behaviouristic reaction—mainly, if not entirely, affective in origin—to some sensible stimulus. It is in this reaction that we "sense" the *presence* of the object. He has shown experimentally that we can have this behaviouristic reaction apart from any *physical* presence; and hence he infers, and we are disposed to agree with him, that this *sense of presence* is in itself an hallucination, a mental construction, not *necessarily* proceeding from a *physical* object here and now. We are speaking of course of a *sense* as distinct from a *judgement of presence*, for the various statements of these Christian mystics indicate an immediacy of experience more akin to our normal sense experience than to our intellectual apprehension. Leuba explains this "immediacy" as an hallucination, and it is possible for a theist to accept the position. That "behaviouristic" reaction to grace which we call a "sensible consolation," however vivid, overwhelming and immediate, does not necessarily reveal God, save only as an object of Faith. Our "feeling" that God is with us is true, if we regard it as an overtone to an act of faith, but is false if we regard it as a "physical" symptom of His presence, a natural rather than a moral sign. To put it in a paradoxical form: the presence of God felt is a veridical hallucination.

Although Father Poulain's earlier statements as to the character of his celebrated criterion of the mystical state, "The presence of God felt," come within the ambit of Leuba's criticism, we must read them in the light of his subsequent explanations (*Grâces d'Oraison*, Chap. xxxi., §28 bis., p. 570, English Version).

> Let us suppose that God gives a thought or a feeling (the thought of His presence, for instance). Can He, or can He not, by a supernatural and intellectual mode of sight, make known the *fact* that this action proceeds from Him? I can see no impossibility here. But if we grant that God has this power, it follows that we can have a knowledge of the presence of God that *includes* a perception

which puts us into real communication with Him and which is therefore experimental and without reasoning.

Not only does this knowledge contain a perception, but we can admit that it merits this designation throughout. In fact, many Catholic doctors think that knowledge of a law implies knowledge of a law-giver; that we do not then pass from one idea to the other by reasoning: they are two aspects of one and the same idea. So, too, God's action manifested implies His presence, and we therefore know this presence without reasoning and experimentally.

To be quite just, Father Poulain offers this merely as a partial explanation of how an experimental knowledge of God in this life is at least possible. This was in reply to certain exceptions taken against his theory by Canon Saudreau. For Father Poulain experimental knowledge is that "which comes from the object and manifests it, not only as possible, but as existing, operating, in order to make itself known and generally as being present." If therefore God infuses into the human mind the *idea* of His presence and concomitantly reveals that this *idea* has been Divinely infused, this is sufficient to give the human mind an experimental knowledge of His presence. Here we have an *idea* and a behaviouristic reaction as in Leuba's theory, but both Divinely caused and guaranteed. We would have in such circumstances an infallible certitude that God was present, but would we have an experimental knowledge except in a very wide sense of that term? Would it transcend save in the vividness of our certitude, an ordinary act of faith in the presence of God? But it may be urged that we would be conscious of God's action, and seeing clearly the act as Divine we would see the Agent in the act. Granted! but we would see Him as an Agent, not as an Object: it would still be an inference, however immediate, not a perception. From the purely psychological point of view we would not get beyond the "veridical hallucination."

If God makes known to the recipient that any consolation proceeds from Him, does He render that consolation

mystical, or is the mystical character of the experience to be grounded in the revelation of its Source? Is it an epiphenomenon? No doubt the suggested theory will account for a very vivid sense (in a broad use of the term) of the presence of God, but is such a "sense" mystical? Such an experience need not be the obscure contemplation described by St. John of the Cross; it might well be one of that great group of phenomena known as visions, locutions, touches, which are only mystical in their origin but not necessarily mystical in their psychic character. Unless, therefore, we regard "the presence of God felt" as constituting the "quiddity" of mystical experience, we can only look upon it as a symptom, very valuable no doubt for the spiritual director, but a symptom only and not a criterion. It is not evidential and may even be illusory, not as declaratory of the *presence* of God, but of *our perception* of that presence.

As a theorist of mysticism Professor Leuba fails in two essential points: (1) to account satisfactorily for the implied co-existence in the great Christian mystics of mental morbidity and heroic virtue; (2) to explain that fundamental characteristic of mystical experience which St. Dionysius the Areopagite calls the *ἀγνωσία*, the "unknowing." To meet the first difficulty he systematically depreciates the virtues of the great mystics, reducing their more external virtues to what is merely a very high level of respectability, and ignoring or burlesquing the more interior qualities. Humility and chastity are but camouflaged pride and impurity; sanctity, the sublimation of the seven deadly sins. What is real in their virtues is visible, external, known to the police and the man in the street; their interior life, that to which they attributed supreme importance, is as unreal and sometimes as unpleasant as the dreams of a sick man. Even thus reduced there is still a great discrepancy between St. Teresa and an "ecstatic" patient at La Salpêtrière. It does not appear that Pro-

fessor Leuba has removed this difficulty even from the point of view of pure medical materialism. His efforts however will serve one useful purpose. If any spiritual director of contemplatives has any lingering doubt as to the practical soundness of St. John of the Cross's teaching even in its most austere expression, he has but to read this book of Leuba. If he thinks St. John of the Cross exaggerates when he says :—

> Not only do temporal goods, the delights and the tastes of sense, hinder and thwart the way of God, but spiritual delights and consolations also, if sought for or clung to eagerly, disturb the way of virtue (Spiritual Maxims 364),

or even when he declares :—

> He will never attain to perfection who will not labour to be satisfied with this : that all his natural and spiritual desires should be satisfied in the absence of everything which is not God. This is most necessary for abiding peace and tranquillity of spirit (Spiritual Maxims 351),

let him study Leuba. If he is disposed to over-value "sensible consolations," if he is inclined to tolerate or even to approve of sentimentalism in prayer, if he cannot realize the force of these words of Blessed Angela of Foligno :—

> But know, my sons, that as in love all good and merit are included, so also all evil and demerit and sin. Wherefore, my most dear children, there is nothing in the world, neither man, nor devil, nor any other thing, which I so suspect as love ; because love penetrateth into the soul more than anything else, nor is there anything that so filleth the mind, and penetrateth into the whole heart, as love. And except that by force it be brought into subjection, the soul is easily thrown headlong into a thousand dangers, and suffereth great ruin. And I speak not this of wicked love, for love that is wicked ought to be avoided and rejected by all, as something diabolic and dangerous ; but I speak of the spiritual love which is between God and the soul, and between neighbour and neighbour. Now, that the love which is between God and the soul ought to be an object of suspicion unto every soul, is clear, because the love which the soul hath for God, except it be armed with great knowledge and discretion, either soon falleth away,

or is deceived, or cometh to an untimely end, for whatever is inordinately taken, cannot either well or healthily be continued. And there are many who think themselves to stand in the love of God, who are standing in His hatred, and in the love of the flesh, and of the world, and of the devil (Visions and Instructions, Chap. 64),

let him study Leuba. *Fas est ab hoste doceri.*

The second essential weakness of Professor Leuba's system is its failure to account for the most characteristic feature of mystical experience as described by the great Christian mystics: the act of "*unknowing*" in their mystical apprehension of God. If we accept their descriptions, and the "profane" psychologist has no other source of information, we must recognise that the act of the human mind in mystical contemplation is something *sui generis*, quite other than the normal act of understanding. It seems at once an intuition of reality and an abstraction from the real, an affirmation of existence with a denial of the existent, an emptiness that is a plenitude, a psychic blank that is ultra-dynamic, a Beyond that is Here and Now. How explain a state which seems a mass of contradictions? Professor Leuba's theory is simple and superficially satisfactory. The mystic, by a method of psychic drill, induces a state of trance—*i.e.*, a psychic blank. "The partial or total suspension of the sensory and intellectual functions or, more generally, of mental activity is the fundamental trait of all trances, whether religious or not, and whether produced naturally or artificially" (p. 253). The mystic "trance" may be even spontaneous, but is generally a result of previous exercises akin to Yoga practice.

In the lives of the Christian mystics there is the sudden, unexpected rapture, and there is the ecstasy prepared for and brought about by a fairly reliable technique. For persons in the physiological condition of our great mystics, already habituated to the mystical ecstasy, it is usually sufficient to conform to the directions set down by the mystical masters in order to determine the love-ecstasy, characteristic of grand Christian mysticism. (p. 183).

It will thus be seen that Professor Leuba, by what is for him a systematic necessity, rejects the common testimony of Christian mystics that ecstasy and indeed most of the high levels of mystical experience are unattainable by mere human effort and that such states are the pure gift of God. If, as Professor Leuba contends, these states can be worked up, and if in addition they have strong affective concomitants developed and energised by precedent exercises and suitable endocrine stimulation, we have sufficient foundation for a "fictional" construction which will fill up the blank when the mystic recovers consciousness. What form this construction will take will depend on the dogmatic preconceptions of the mystic and the emotional energy of the experience; the dim memory of the psychic blank giving the requisite negative tone and the keen emotional experience giving the sense of magnificence, satisfaction and even the illusion of ineffable revelation. Nitrous oxide, opium, hasheesh and mescal have given similar results. Thus the fundamental characteristic of obscure mystical contemplation as analysed by St. John of the Cross and other great mystics becomes merely a *post factum* reconstruction of a gap in the mystic's stream of consciousness based on dogmatic views of the immensity and incomprehensibility of God, and is not part of the experience itself but an addendum.

The theory is ingenious; but before we can accept it we must be prepared to recognise that the great Christian mystics were very bad observers of their own mental states, quite unsuspicious of the possibilities of illusion, and generally victims of the mythomania of Dupré. If we could credit them with such a combination of qualities, we could readily accept Leuba's hypothesis; but we should hardly trouble ourselves further in the matter, unless we were alienists. No doubt mythomania will explain everything, as M. Marcel Boll has shown, but the explanation is a shade too simple to satisfy everybody.

Let us consider some of the difficulties which confront Professor Leuba's theory. It is grounded on the principle : " It is only when all consciousness has disappeared that the trance is complete " (p. 252). A real psychic blank, a " mental " state whose content is psychically non-existent, not merely unperceived at the moment but leaving no psychic trace after it, is the requisite material out of which the mind constructs the fiction of an obscure mystical apprehension of God. From it the mind gets the note of obscurity and ineffability ; from the concomitant emotions it draws the notes of " certitude " and magnificence. The Quietist created a psychic blank, presuming that the Divine would fill it up. Professor Leuba rejects the Divine, but is equally confident that the myth-forming powers of the human mind can fill the void with equal efficiency. Thus extremes meet.

The first difficulty that presents itself is a mere matter of fact. What evidence have we for the existence of a real psychic blank, comparable to, say, a mild attack of *petit mal*, as a feature of mystical experience ? Professor Leuba writes : " Most mystics believe, moreover, that the ' suspended ' intelligence is replaced in the trance-state by a supernatural understanding ; thus they would account for the conviction of revelation " (p. 252). Indeed anything which could be represented as a complete cessation of psychic activity was always regarded by Catholic directors of contemplatives as supremely suspect, as something morbid or satanic. If Professor Leuba were familiar with the writings of St. John of the Cross he would doubtless have cited the following passage in support of his theory (*Ascent of Carmel* Bk. II., c. 14, §10) :—

At other times, also, the divine light strikes the soul with such force that the darkness is unfelt and the light unheeded ; the soul seems unconscious of all it knows, and is therefore lost, as it were, in forgetfulness, knowing not where it is nor what has happened to it, unaware of the lapse of time. It may and does occur that

many hours pass while it is in this state of forgetfulness ; all seem but a moment when it again returns to itself. The cause of this forgetfulness is the pureness and simplicity of this knowledge, which, being itself pure and clean, cleanses the soul while it fills it, and purifies it of all the apprehensions and forms of sense and memory through which it once acted, and thus brings it to a state of forgetfulness, and unconsciousness of the flight of time. (Lewis p. 127).

But St. John of the Cross adds a sentence later :—

This knowledge leaves behind it in the soul, when awake, all the effects it then wrought, without any consciousness on the part of the soul that they were wrought. These effects are the lifting up of the soul to the heavenly Intelligence, the withdrawal and estrangement of it from all things, and from the forms and figures of them.

Unless we are willing to regard St. John of the Cross as afflicted with mythomania, the state here described is something very different from a pious swoon or an attack of *petit mal.* We can hardly call a state which leaves such spiritually dynamic traces as a real psychic blank. Scaramelli (Tr. 3, no. 82) calls such a state *spiritual sleep* and in the opinion of Poulain (*Grâces d'Oraison*, ch.xviii, § 51) seems to exaggerate its negative quality, but it may be the latter attached too great an importance to normal consciousness as a factor in mystical experience. Our normal awareness of our psychic states comes largely from our reflection on them ; it is after the fight that we realise how much we are hurt.

As far as the present writer is aware, it is only in this not very well defined state or stage of mystical experience, called *somnus mysticus* or sometimes *mors mystica* by theologians, that we get anything approaching a complete interruption of consciousness. It is usually classed with the prayer of quiet, below ecstasy proper which it somewhat resembles. Most experienced directors would regard it with suspicion, rather as indicating the presence of disease than any mystical grace, and would require strong pragmatic proof by growth in virtue that this mystical slumber came from God before they would give it approval.

Pace Professor Leuba ecstasy proper, in the sense in which the term is used by mystical theologians, is very far from a state of unconsciousness. Lopez Ezquerra (*Lucerna Mystica*, tr. 5, cap. 22) distinguishes, for the practical guidance of the director, ecstasy from the *somnus mysticus* by the fact that in ecstasy the soul knows how it is occupied, whereas in spiritual sleep it has no such express knowledge. Ecstasy is a rare state even among the great mystics, and it seems improbable that they based their descriptive analyses of mystical phenomena of the obscure order exclusively or even mainly on their ecstatic experience. It seems more probable that the prayer of quiet furnished them with more abundant data, as in that order of experience there is often the possibility of a direct comparison of normal thought processes with mystical apprehension. Here these two modalities of thought alternate, obstruct and concur; nor does mystical experience at this stage so absorb the powers of the soul as to totally prevent all reflection on its operations. We have therefore a certain amount of direct evidence as to the characteristics of these states, and we are not entitled to interpret that evidence in such a way as to destroy its observational value. The statements of the great mystics are the only evidence we have of their psychic states, and if we see fit to dismiss these statements as fiction, further discussion is surely waste of time.

It is beside the point to urge with Professor Leuba that the "anaesthetic revelation," the action of opium or hasheesh, affords experiences as magnificent, as certitudinal, as ineffable as those of the great mystics, for if these were of a similar order the reactions of the recipients should be similar. The "anaesthetic revelation" wears badly; but mystical experience, as seen in the lives of the saints, stands wind and weather. Durability is a very real test of the genuine in mysticism, as is seen in the case of Mlle. Vé. *Post factum* criticism destroys

the "anaesthetic revelation" and obliterates pseudo-mystical experience of the revelatory order, but it does not affect the genuine article. St Teresa in her *Interior Castle* (Mansion V. cap I. §§8, 9,) uses this permanence as a test of genuineness. St. John of the Cross uses it as an argument against undue attention to visions and locutions by the recipient, for he values the permanent trace far above the transient conscious experience. It is his position that, if the experience comes from God, it works apart from our awareness, and that our attention may even prove an obstacle to the Divine hidden energising. For the Christian mystic it is the permanent results of the experience, not its immediate vehemence, which count. "All visions, revelations, and impressions of heaven, however much the spiritual man may esteem them, are not equal in worth to the least act of humility; for this brings forth the fruits of charity, which never esteems nor thinks well of self, but only of others" (St. John of the Cross, Maxims 317).

The second difficulty is this: Can we get the "unknowing" as described by the Christian mystics from the data conceded by Professor Leuba? Does his construction in any real sense represent the *ἀγνωσία* of Dionysius? A composite ghost of a crowd of judgments of value and dogmatic memories is embodied in a strongly affective experience, and the complex is retrojectively and interpretatively localised in a psychic blank which gives to the whole that flavour of ineffability and vague immensity, the illusion of the Divine. Must we not conclude that the whole drive and urge of the experience comes from the affective factor? The cognitive elements are singularly weak, some dogmatic memories and the awareness of a gap in consciousness. Lower the affective tension to any notable extent, and it is difficult to see how the other elements combined could effect such strong behaviouristic reactions as we find in the narratives of the great Christian mystics.

How could such weak elements sometimes capture the whole attention, and at other times modify the whole field of consciousness in a highly selective fashion? The emotive drive might explain the capture of the total attention; but it would not account for the partial and curiously selective inhibitions of the "ligature" as detailed in Poulain, Chap. xiv.

It can readily be seen from the following extract from St. John of the Cross that the lowering of the affective tension was a main feature of what Professor Leuba would call his "mystical technique":—

> For this reason, then, if any one is moved to love God by that sweetness he feels, he casts that sweetness away from him and fixes his love upon God, Whom he does not feel; but if he allowed himself to rest in that sweetness and delight which he feels, dwelling upon them with satisfaction, that would be to love the creature, and that which is of it, and to make the motive an end, and the act of the will would be vitiated; for as God is incomprehensible and unapproachable, the will in order to direct the act of love unto God, must not direct it to that which is tangible and capable of being reached by the desire, but must direct it to that which it cannot comprehend nor reach thereby. In this way the will loves that which is certain and true, according to the spirit of the faith, in emptiness and darkness as to its own feelings, above all that it can understand by the operations of the understanding; its faith and love transcend all that it can comprehend. (Letter X.).

Thus St. John of the Cross depresses the affective element as he represses all elements of distinct cognition, of particular knowledge, in the mystical process and obliges us to look for the energising element, the drive and urge of mystical experience, in that psychic "blank": the "ray of darkness" of Dionysius. He has no use for the illusion with which Leuba would fill the gap of consciousness; his whole "method" tends to widen it and make it deeper. If Baruzzi makes anything clear in his monumental monograph,[1] it is the uncompromising negativity of St. John of the Cross. Are we then to class

[1] *S. Jean de la Croix et le problème de l'expérience mystique.* (Alcan. 1924. 40fr.).

the great mystical doctor of Carmel as a complete and absolute quietist? We can hardly avoid doing so if we accept the "unknowing" as a purely negative state, a gap in consciousness, a psychic nullity, an obtrusive blank to be filled up. It is true that the Christian mystics describe it in negative terms, but they ascribe to it very positive dynamic qualities: it fixes and often absorbs the attention, and even when comparatively feeble modifies the field of consciousness very profoundly, inhibiting some elements while leaving others active, as in the case of the "ligature." From their description we can gather that they regard it as a positive psychic entity, yet indescribable save by negatives. It is a positive experience, but quite "other" than any normal experience, so "other" in fact that it can only be represented *verbally* by terms which deny the characteristics of normal psychic experience. Hence its analogies with the most primitive forms of sensations, taste, touch, sounds, colours. How describe a red light to a man born blind, if not by some string of negatives?

If then we would construct a theory to explain the facts of mystical experience, we must look for some positive element in the fundamental "unknowing" of the mystics. Professor Leuba's theory fails to explain the facts taken in their integrity; it only accounts for them as illusions, sometimes poetic, often silly, and not seldom morbid and disgusting. We have to replace his negation by a position if we are to get something of interest to others than alienists. The possibility of a merely humanist solution of this fundamental difficulty will be examined in a further article.

JOHN HOWLEY.

TOURIST DEVELOPMENT AT HOME AND ABROAD

BY CONSTANTINE P. CURRAN, M.A.

THE tourist business is a modern industry. The Grand Tourist of the eighteenth century, swinging across the Alps in his solitary *calèche* in completion of his university education, has become in our day the student with a travelling scholarship. Gibbon, who somewhere describes himself wandering through Europe "darting contemptuous glances at the stately monuments of Gothic superstition," has mellowed into the professional writer of travel books, a Lucas or a Sitwell; but in their wake has grown up in the last fifty years a great nomadic army, docile and impressionable, capricious in its movements like the herring, yet not wholly unintelligible and of no small value to those who study its habits and guide it along profitable paths. This auriferous shoal, which brings to France an annual revenue of £70,000,000 and to Italy something over £20,000,000, is the greatest of Ireland's undeveloped resources. It asks to be exploited. By merely using to full advantage our present inadequate hotel system, it is potentially worth £2,500,000 to us. With proper development that sum would be doubled or trebled. Actually it is not worth much more than £750,000.

How is this harvest reaped? Each country has exceptional, even unique advantages. France enjoys a special prestige in fashion, Switzerland snow mountains, Italy a soil saturated with culture, Germany an organised life made genial by music and beer, Greece and Egypt the ruins of a great past. These are the natural tourist resources which, differing in each country, attract by their difference. But however different these attractions

may be, they are enclosed in a more and more uniform nexus made out of the desires of the *homme moyen sensuel*, a network of health and pleasure resorts, comfortable hotels, casinos, transport systems, the whole mechanism of travel; and underlying everything, exploiting, developing, co-ordinating, creating, are the great national tourist organisations.

Take as an example of one such continental organisation, the Italian Touring Club. This Club, a voluntary association founded thirty years ago, with its headquarters in Milan, now counts 300,000 members. It offers to its members all the usual travelling facilities provided by similar clubs in these countries. But its energy stretches far beyond the acquisition of these individual privileges. The enumeration of some of its committees will best indicate its range. There are two committees for road improvement, one of which maintains, amongst its other business, an institute with a laboratory devoted to experiments on road material. Similarly one of the committees on hotel improvement supports a professional school for hotel employés. The instruction, which is free, covers a two years' course. Following the example of France, Germany, Switzerland and Holland, there is a national committee for the protection of beauty spots and of historical monuments. There are committees devoted to the special interests of motorists and cyclists, to propaganda in the secondary schools, to the charitable maintenance of an Alpine home for poor or delicate orphans of the war.

The list of the Club's publications is enormous. It is, at the moment, publishing an invaluable series of guides under the editorship of Sr. Bertarelli, the President of the Club. These guides, which are distributed free to members, are written by the best authorities in Italy and excel Baedeker, the top of praise. The twelfth of the series, Rome and its Neighbourhood, was published in 1925 in a members' first edition of 320,000 copies.

It is a volume of 870 pages, fully equipped with maps. Up to the end of 1924, 2,765,000 copies of these guides had been circulated. The Club publishes as well a fine series of maps—eight million have been sold in fifteen years—and incidental to them a scholarly report and index of Italian place-names. The General Annual is a volume of 1,600 pages, with smaller annuals for sectional interests. The technical sub-committees are equally prolific. The sub-committee on hotel improvement has issued for ten lire a veritable encyclopaedia of hotel craft (1,000 pages) and at least six other volumes of special interest to hotel-keepers. Similarly the road committees have published thirteen volumes for engineers and contractors. Besides all these there are six periodicals issued fortnightly, monthly or quarterly by each of the chief committees. One is specially designed for circulation in Latin America, and plainly invites us to similar consideration of our people in the United States.

When we have considered this volume of work, we have not nearly surveyed the whole apparatus of technical efficiency which underlies the tourist industry in Italy; for the Touring Club is only one, though the greatest, of a number of voluntary organisations. Out-topping or under-propping all is E.N.I.T.—Ente Nazionale Industrie Turistiche. Established by the State five years ago, with head-quarters in Rome, its business is to stimulate and co-ordinate at home and abroad all the complex manifestations of *turismo*. Irish travellers who have sought the help of its London office in Waterloo Place are aware of the copious and exact information that is quickly put at their disposal. The Council of E.N.I.T. is made up of a senator, a deputy, three nominees of the Touring Club, one of the Hotel-Keepers Association, one of the Foreign Tourist Traffic Association, one from the Union of Chambers of Commerce, three expert citizens nominated by the Minister for National Economics, and four officials representing respectively the Ministries for National

Economics, Finance, Foreign Affairs, and the Department of Railways. The Council reports annually to Parliament through the Ministry for National Economics.

From the beginning E.N.I.T. directed its attention to the hotel problem, which presented itself (as it does in Ireland) under the triple aspect of shortage, deficiency in hygiene and comfort, irregular classification and charges. Through its efforts financial backing was found for the hotel industry by the banks or by co-operative action within the industry. Hotels have been graded, and by a law of January 8, 1925, the publication of prices has been made compulsory. By further legislation of May 1925, hotel inspection and hygienic control were entrusted to E.N.I.T. In addition to the school of hotel-keeping established at Milan in conjunction with the Touring Club, E.N.I.T. has founded schools at Rapallo, Turin, Rome (Civita Vecchia), and Montecatino frequented by some 180 students, for the most part sons of hotel-keepers or already engaged in the industry. Its propaganda is carried on through regional publications or brochures on specific subjects such as Italian art, sanctuaries, health resorts, medicinal waters, and cooking; through illustrated folders (E.N.I.T. has collected upwards of 50,000 photos), films, exhibitions and fairs; by arranging tours to which journalists and doctors, home and foreign, have been invited.

The state endowment is comparatively small, amounting to one and three-quarter million lire, say £14,000 annually. One million of this is in substitution of the abolished tourist tax, half a million comes from the Ministry of National Economics, and a quarter million from the Foreign Office. Its entire revenue is something over two million lire (£16,695), of which £3,950 is spent in administration, £6,150 in foreign and £3,775 in home propaganda, £1,375 in statistical or archival work, and £595 in assisting the technical schools.

This is the brainwork and money that Italy puts into

its earning of £22,000,000 a year from the tourist, doubling its home receipts and nearly trebling its foreign income within three years. Small wonder that Mussolini wrote last May to the President of E.N.I.T., pointing to this tourist industry as a primary element in the restoration of the trade balance.

Now, Ireland in its way has equal power of attraction, with the special advantage of the millions of her children abroad over whose imaginations she weaves her spells. Ireland in a little space is all compact of natural beauty. Not without reason did that beauty move the affection of our earliest poets to nature poetry unique in world literature. It is also the richest country of Western Europe in the remains of antiquity, whether in sepulchral tumuli which make of the Boyne another Valley of Kings, or in the uncounted profusion of stone and ring forts, or in the prehistoric gold ornaments of our Dublin Museum to which Sir Arthur Evans finds a rival in Athens alone. Excelling in the decorative arts, our people developed national variations in architecture in the sixth, ninth, eleventh, thirteenth and eighteenth centuries which, scattered over the country-side, are the silent witnesses to its history. The capital still preserves much of its gracious dignity in architecture and in its happy situation between the mountains and the sea, with public collections of international importance. This complex of natural beauty, art and history is our inheritance to be used wisely, to be wasted, or to be defaced. We are doing all three in unequal measure.

Consider Dublin. Its streets were nobly planned and its architecture distinguished, preserving even in its decay something of dignity and reserve. But with the social disintegration of the nineteenth century big business and shop-keepers got their untrammelled way, and a pretentious, tatterdemalion disorder set in. They thought bad manners meant good business, and entered upon an ostentatious rivalry which forbade neighbourly

building and broke up the harmony of the street. There followed the blatant publicity of outrageous façade advertisment, street hoardings, sky signs and posters, an orgy of waste which defeats its object; for the exhausted citizen, every sense insulted, shuts his eyes and endeavours to ignore all. When everybody yells nothing is heard. Business gains nothing, but the city loses charm and magnetic power when buildings like the Rotunda are defaced by the peculiar horrors of cinema advertising and College Green degraded by the unsightliness above Cook's agency.

Going out from the centre of the city to the suburbs, we again encounter unnecessary ugliness and waste. The canals, the Dodder and the Tolka are all potential river banks. Berlin makes a thing of beauty out of a river which is naturally little more than a drain. We present a spectacle of river and canal banks neglected or fallen in, seats broken up and trees cut down where agreeable malls might exist for the recreation of citizens. Further out, where wealth might be realised we find impoverishment. Dublin is eminently fortunate in its proximity to the mountains and the sea. In any well ordered community Glen Dhu and Howth would be natural reservations, their beauty jealously guarded. Instead the woods are ruthlessly cut down from Killakee to Kilmashogue, and Howth is disfigured with houses that would intimidate a Viking.

I dwell upon Dublin not merely because it is the chief tourist resort in Ireland, but because the evils which afflict it are shared by every tourist resort in Ireland. Is there a town or village which, to take one instance, makes the most of its river? I know none if it is not Inistioge, where overhanging woods fall down upon the old Priory and the little lime-planted village square fronting the Nore bridged with its bridge of ten arches. Not Drogheda, most depressing of Irish towns for all its wealth of historical building; nor Navan, which turns

its back upon one of the pleasantest river-stretches in Ireland; nor Galway, which hides its river; nor Limerick, though the expanse of waters which mirror the old houses of Arthur's Quay and the great walls of John's Castle and the old Cathedral is memorable; nor even Cork, with the Mardyke. Why, there is not even a service of motor boats on the Blackwater, Barrow or Boyne, or on the Killarney lakes.

So much for our neglected heritage of natural and civic beauty. The bait of antiquity and historical association is even less temptingly displayed before the tourist. I have heard our most distinguished archaeologist say that the over-growth of brambles which hide from view so many sculptured tombs and sedilia protect them at least from a worse fate. Driving through Limerick, Clare and Tipperary I found only three out of twenty old churches kept in tolerable decency. Through the rest one stumbled over and between graves hidden in long grass and through a jungle of nettles and thorns. Even in Adare the contrast between the condition of the Franciscan Friary and the golf links about it was informing. In Adare Castle as in Trim the staircase and ladders are broken, and the ascent is perilous or impossible. Superstition has hitherto protected our ring forts, but this defence is yielding to modern education and economic pressure. Nor is the public authority blameless. New Grange is in charge of the Board of Works, and yet its souterrain is so ravaged by rat holes as to be a danger to the unwary visitor. No signposts point out his way, and when he reaches the tumulus he must turn back more than a mile towards Drogheda because no sufficient indication warns him of the whereabouts of the keys. Similarly at Dunbrody Abbey and elsewhere. At Monasterboice lichen is allowed to obscure the high cross.

Let us pass now to the provision made for feeding and housing the tourist; and since this matter of hotels—their food, service and charges—raises fierce passions

and conflicting testimony in any company in which it is discussed, it will be well to proceed with some care. In the first place hotels cannot be isolated from our social fabric. They are part of it, and to animadvert on them is to criticise ourselves, the standards we passively accept, the abuses we tolerate. They are the public evidence of the national indifference to good food and decent surroundings and of our subservience to the profiteer. Hotel food is very often bad and dear. Our own food is bad and without variety. *Il n'est de bonne cuisine que simple.* Our food is simple without being good, never ingenious, and not always agreeable. Hotels and restaurants but reflect this general or national defect.

So also with rooms and their decoration. Lagging behind in domestic architecture, the modern feeling for air, light, colour and simplicity, which profoundly affects decoration abroad, has hardly touched Ireland; and in reproaching our hotels with obtuse disregard of these things, we recognise that they are only a little behind the general Irish insensitiveness to these elements of beauty. But having made all these allowances, the case against the average Irish hotel is deplorably strong. There are approximately 600 hotels in Ireland. Judged by accepted international standards there is no Irish hotel of the *de luxe* or even of class A category. There is no need for the *de luxe* hotel in Ireland; but we want in Dublin one Class A hotel, if only to set and maintain a proper standard of service. We have a number of good hotels of the second order; but their number is far too small to lift the reproach of expensive inefficiency. Has Limerick or Cobh a tolerably good hotel? What is the average standard in Cork and Lisdoonvarna? It is an invidious and unnecessary task to single out individual instances; the type which ruins our reputation is too well known to need any detailed description.

Hotel reform is antecedent to all reform. When two-thirds of the Irish hotels have been raised to a high

minimum standard of efficiency the publicity campaign should be seriously undertaken. There is no Baedeker for Ireland or any Irish guide book in an international series. Murray's Handbook, admirable in many ways, is tinged with an obsolescent colonialism. In Stephen Gwynn we have a writer of exceptional charm, with a quite unusual faculty for historico-topographical writing and an infectious enthusiasm for fishing. His talent should be enlisted and exercised to the utmost. We want provincial guides; we want a *Wanderer in Dublin* on the lines of Lucas's well-known series; we want more D. L. Kelleher. The material in George Coffey's and Margaret Stokes's books should be widely diffused. Apart from catalogues we want handbooks to all the National Collections, and we want other manuals on sectional subjects: architecture, painting, health-resorts, spas, hunting—we have one on fishing. Posters should be commissioned from Irish painters of repute, and illustrated folders should pullulate.

One may expose and criticise these deficiencies all the more frankly because they are already fully recognised by the new Irish Tourist Association, and effective steps have been taken to remedy them. The Association was established in January, 1925, as the result of a conference held in Government Buildings under the Presidency of the Minister for Industry and Commerce. The I.T.A. is an energetic body, and I suspect there is nothing in this article unfamiliar to its secretary. It has already succeeded in the ticklish task of listing and publishing in a handbook the tariffs of 80 per cent. of Irish hotels. This is one step towards grading. Under its auspices two Hotel Conferences have been held in Dublin, at which a progressive and intelligent spirit of co-operation was shown. The I.T.A. knows where the problem of tourist development is centered, but the proponderance of hotel members will not be without some danger to its work if a normal balance

is not established by the numerous accession of lay members. A rigorous and independent criticism of hotels is vital to their own interest. The rapid development of the Touring Club department of the I.T.A., to which membership is open for five shillings a year, will guarantee this criticism. We have in the I.T.A. a young organisation beginning to work on lines like those described above.

The Local Government Act, 1925, has given power to the county councils or county borough councils to levy a rate for tourist development to the extent of one penny in the pound and to town councils to the extent of three pence in the pound. The Act has the further admirable provision that moneys so raised may be paid into any approved association founded for the purpose of such development. Central expenditure will obviously produce the best results. The I.T.A., whose accounts are subject to Government audit, has been recognised by the Government as a suitable body for such central expenditure; and an increasing number of local authorities are taking advantage of their enlarged powers, and will use the machinery of the I.T.A. in this expenditure. This local endowment should ultimately put the I.T.A. into a position similar to the E.N.I.T. or the Office National du Tourisme. If the example of continental methods proves anything, it proves that such expenditure is a sound investment and that the collaboration of the State and local authorities with such a voluntary organisation as the I.T.A. is the effective instrument of progress.

C. P. Curran.

CHRONICLE

Mill Hill, 1866–1926

BY STEPHEN J. BROWN, S.J.

THE story of the origin and progress of St. Joseph's Foreign Missionary Society, Mill Hill, which this year celebrates the Diamond Jubilee of its foundation, besides its interest for all who have at heart the Mission Cause, has a human, one might almost say a romantic, interest of its own.

The story begins about the year 1855 with an idea that gradually took hold of the mind of a young English priest (he was only twenty-three) till it became almost an obsession. Herbert Vaughan was at that date Vice-President of St. Edmund's Seminary, Ware, and it might well have seemed that the path of duty and zeal lay clear and straight before him—to throw his entire energy into work for the Church in England. The Catholic body was an insignificant minority, conspicuous for nothing but poverty. Thousands lived isolated amid overwhelmingly Protestant populations, without priest or church or school. Churches, where they existed, were often little better than barns, and the clergy worked for a starvation pittance.[1] Yet young Father Vaughan's thoughts turned obstinately towards the pagan world. He strove to banish the idea as an absurdity or a delusion, but it haunted him unceasingly. His imagination had been set on fire by the examples of St. Francis Xavier and St. Peter Claver. "The glorious successes of Xavier," writes his biographer, "seemed to widen his horizon and to flatter his hope of doing something great for God; but the dominating influence was that of Peter Claver. The thought of this seventeenth-century saint who vowed himself for life to be the slave of the slaves, who were then being brought in shiploads from the coasts of Africa to the great market in Cartagena (S. America), coloured his thoughts for years together." It is significant that the first mission of the Society he was to found would be to the negroes of America.

He first opened his mind to his then religious superior,[2] Henry Edward Manning. He was listened to with a kindness which delighted him, but advised to wait. He determined to lay his project before the head of the Church in England. In 1860 he

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[1] Snead Cox: *Life of Cardinal Vaughan.* Vol. I., p. 105.

[2] Father Vaughan belonged to the Congregation of the Oblates of St. Charles.

happened to be driving with Cardinal Wiseman in the Isle of Wight. Very timidly and cautiously he broached the subject. To his surprise the old man, who had been dozing, suddenly manifested the keenest interest. "Listen," he said, "I have never yet told this to anyone; but the time, I believe, has come. When I was in Rome before my consecration I had great mental troubles, and I went to a holy man, since dead and declared Venerable (Ven. Vincent Palotti). He made me sit on one side of a little table; he sat on the other. A crucifix was on a table between us. After I had opened my mind to him, he slipped down from his chair on to his knees, and after a moment's prayer said, 'Monsignor, you will never know the perfect rest you seek until you establish in England a College for the Foreign Missions.' These words fell on me like a thunderbolt. . . . . I made a resolution to try to form a society of priests who should establish a College for Foreign Missions." But the times were not ripe, other duties absorbed him, and above all no man destined for the work had presented himself. Here at last, so it seemed, was the man.

But nearly three years passed before the project took definite shape. They were years of suffering, physical and mental, of alternate hope and dejection, but also of much thought and prayer. A retreat made under a Spanish Jesuit at Puerta de Santa Maria put an end to hesitation and uncertainty—he would forthwith found a missionary society, and he would make it the work of his life. From that moment Herbert Vaughan set about his task with that strenuous unpausing vigour and directness of action that were ever characteristic of him.

To the worldly wise the project must have appeared quixotic in the extreme. He had no means nor resources of any kind, no money, no house. And it would seem that the already overtaxed Catholics of England could spare nothing for any such purpose. But he had the approval of his Superior, of the aged Cardinal, and of the English bishops. A great Catholic Congress at Malines, in August, 1863, had, on the motion of Montalembert, carried by acclamation a motion approving of his enterprise. And it was to receive a still higher approbation. In October of the same year Herbert Vaughan travelled to Rome. Pius IX. received him graciously, and solved the conflicting claims of England and the heathen by the simple formula, *Oportet unum facere et aliud non omittere.*

As for resources, they could be begged. And on the 17th December, 1863, he sailed, alone, for America to beg them. The United States was in the throes of the Civil War. Yet he collected

several thousand pounds in California. In South America war and revolution were rife, yet he succeeded in getting money there, too, and eventually returned with £11,000 in cash.

In 1865 he was back in England, where Manning had just succeeded Wiseman in the see of Westminster. No time was lost. An appeal was issued for further funds, and the leading English Catholics responded generously. A house, Holcombe House, Mill Hill, was found and, despite the inconvenient fact that its owner was quite determined not to part with it, was acquired. But not till Father Vaughan had called there one day with a brown paper parcel, after depositing which in a cupboard and saying he would call back for it, he had taken his leave—it was a statue of St. Joseph. Then, on a bleak day of snow in March, 1866, a start was made. A cart was sent out to the empty house with a few blankets, chairs, and bedsteads for the night. "We began," wrote Father Vaughan in his diary, "in real poverty—six mugs, or rather college pudding basins, for our tea and beer, and borrowed a few chairs and plates." There was one professor and one student. So are wont to begin enterprises destined to greatness.

Those were Spartan days for the first dwellers in the new mission seminary. The enthusiastic and impetuous young priest thought only of the goal ahead. He would spend no money on bricks and mortar nor on the comforts and conveniences of life. All the money must go into burses. They were short of beds, so trusses of hay were ordered for the dormitory. A great saving might be made if they agreed to dispense with the services of a cook and did without fuel. So Herbert Vaughan drove about London in a coster's cart, picked up what he could get cheaply, and returned with sundry delectable dishes of tinned meat and so forth. But it was characteristic of him that when it was made clear to him that not even a foreign missions college could be conducted on such a régime, he reversed his policy with perfect readiness and simplicity.

That was in 1866, and already in 1871 we find the first missionary band preparing to set out. The Holy See had called upon the new society to take up work among the negroes of the United States. Nothing could have been more welcome to Father Vaughan, and in November of that year he sailed for America with his four young apostles. He saw them settled in Maryland,[1]

[1] This mission made remarkable progress, and in 1893 had assumed such proportions that it was considered expedient to form the American Province into an independent Foreign Mission Society.

and then set out on a tour of the Southern States to study the negro problem for himself. It was by no means a holiday trip. He collected information from every available source, including, for example, Jefferson Davis, the ex-President of the South. His experiences of the attitude of the white man—even Catholics and even priests—towards the negro proved a painful revelation. Before returning to Europe he toured the Eastern States and Canada, collecting funds as he went.

We might expect to find Father Vaughan on his return to England settle down to his work as Superior of the new missionary organisation. But it was not to be. Hardly had he reached Mill Hill when a new call came to him. On October 16, 1872, he received a brief nominating him to be Bishop of Salford. Thus began that great episcopal career which was to end only with his death thirty-one years later. But to the very end he not only retained the Superiorship of St. Joseph's Society but actively directed it and worked for it untiringly.

The Society continued to prosper and to expand. The diocese of Madras had in 1834 been entrusted to Irish priests, Dr. O'Connor being consecrated bishop. A succession of Irish bishops had ruled there. But in the Ireland of those days Foreign Missions were a novelty, and it became evident after a time that a sufficiency of Irish priests would not be forthcoming. Accordingly, in 1875, the then Bishop, Dr. Fennelly, called upon Mill Hill, and in that year four missionaries set out to take charge of the Guntur Mission among the Telugus. To-day a Mill Hill missionary, Dr. Aelen, is Archbishop of Madras, and there are forty-one Mill Hill missionaries at work.

In 1881 a Mill Hill priest, Father Jackson, was made Prefect-Apostolic of North Borneo, and took over that mission. The work has prospered. A network of missions covers the territory from the centre at Kuching, and many conversions have been made. A few years later (1886) came a call to the Maori Mission of New Zealand. Once more the young Society responded, and to-day twenty-one of its priests are at work there. Scarcely a year later there was entrusted to them a mission field which was practically virgin soil—Kashmir and Kafiristan, in the extreme north of India. It is a difficult mission and progress is slow, but the little band of Mill Hill missionaries is gaining ground.

It was just after the Founder's installation as Archbishop of Westminster that his Society received what has proved its most fruitful mission. The White Fathers had long been labouring in Uganda. Persecution and martyrdom had but rendered the

soil more fruitful, and the Christians had grown so greatly in numbers that it was decided to divide the mission-field. In 1894 Father Hanlon was recalled from India, consecrated Bishop, and sent out to Central Africa. To-day there are 60,000 Catholics of the Baganda race and 50,000 catechumens. Seventy missionaries are labouring in this mission.

Other missions followed. In 1905 Father Martin O'Grady sailed for the Belgian Congo with a little band. Next year another band set out to take up work in the Philippine Islands, where the Society's missionaries now number twenty-eight. Some years later Father Fitzpatrick and two companions were given charge of a forlorn little mission in some islands in the Caribbean Sea. And lastly, four years ago a mission was opened in the part of the Cameroons taken over from Germany at the close of the War.

It is a wonderful story of expansion and enterprise; and it is a moving story, too, when one reflects upon the sum of devotedness and sacrifice that made the enterprise and expansion possible.

It is clear that such results abroad could not have been attained without a corresponding development at home. That development has certainly been remarkable. The original Holcombe House has developed into an imposing group of buildings. It has been made the theological seminary of the Society, and has seventy-four students preparing for the priesthood. A Preparatory College, which was opened in 1884 at Freshfield, near Liverpool, has now ninety students. A third college is soon to be opened at Burn Hall, near Durham, in the diocese of Hexham and Newcastle. But numerous as were vocations to the priesthood in England, their number did not suffice for the needs of the Missions. Dr. Vaughan looked abroad for further recruits. A college was opened at Rosendaal, in Holland, and later on another at Brixen, in the Tyrol. Since Cardinal Vaughan's death others have been founded at Tilburg and Hoorn in Holland, and at Absam in Austria. The Society has thus taken on to some extent an international character. In all, 471 students are to-day preparing for the missionary life. Moreover, some fifty brothers have been enlisted in the ranks of the Society to minister to its material needs.

Preoccupation with these material needs led, in fact, to the founding of a new Religious Congregation. Three women earning their livelihood in Rochdale agreed to become Tertiaries of St. Francis. Dr. Vaughan invited them in 1877 to come to St. Joseph's College and undertake the management of the kitchen, the baking, and the laundry. Such were the humble beginnings of St. Joseph's Missionary Sisters, a congregation of a new type which has neither

the peace of the contemplative nor the spiritual work for souls of the active orders. It is the lot of Martha, with but little of the consolations of Mary. Yet the experiment was a success almost from the outset, and the congregation has prospered. The principal work of these Sisters is still the care of the household in the various establishments of St. Joseph's Society. But wherever there is good, humble work to be done they are ready to undertake it. The Sisterhood numbers at present 165 members.

These magnificent results were, under God, due in the first place to the faith, zeal, and energy of the man who began the work and who, as Bishop of Salford, Archbishop of Westminster, and Cardinal, watched over it till the day of his death. It was indeed his life work ; and when the final summons came, he spent at Mill Hill the last days of his life, and there what was mortal of him was laid to rest. Yet, however important the role we must assign to Cardinal Vaughan, the results achieved would not have been possible but for the response his efforts met with from the Catholics of England, rich and poor, clergy and laity. Cardinal Manning was from the first and to the end of his life the Founder's loyal and generous supporter. On more than one occasion the assembled English Bishops gave to the enterprise their official support and approval. Support scarcely less valuable came from leading Catholic laymen and women—the Duke of Norfolk, the Earl of Denbigh, Lord O'Hagan, the Marquis of Ripon, Sir Charles Clifford, Mr. W. G. Ward, Mr. Gaisford St. Lawrence, Mr. John Kenyon, and many others. So great was the solicitude for Mill Hill and so generous the benefactions of Lady Herbert of Lea that she came to be known affectionately as the " Mother of the Mill." But it is on the small contributions of the general body of the Faithful that the Society has ever depended mainly.

Expressive of this nation-wide support has been the celebration this year of the Diamond Jubilee of St. Joseph's Society. The principal ceremonies took place, not at Mill Hill, but at Westminster Cathedral. Cardinal Bourne presided and preached. Ireland may well feel interest and pride in the celebration, since her sons have had so large a share in building up this Society. Irish names figure everywhere on its rolls : to-day a Father Sullivan is Rector of Freshfield and a Father Aherne of Mill Hill. But Irish or not Irish, every Catholic who has at heart the Cause for which it stands must wish St. Joseph's Missionary Society a future of work as noble as it has done in the past and is doing to-day.

S. J. Brown.

REVIEWS

Apologetics

NIRVANA. Par Louis de la Vallée-Poussin. Paris : Beauchesne. 1925. 9 fr.

CATHOLICISM AND THE PAPACY. By Mgr. Peter Batiffol. Authorised translation by O. R. Vassall-Phillips, C.S.S.R. London : Sands. 1926. 3s. 6d.

THE FUNDAMENTALS OF CATHOLIC BELIEF. By Rev. John F. Sullivan, D.D. London : Harding and More. 1925. 8s. 6d.

EVERYBODY has heard of Nirvana ; but nobody knows what it is. " The Paradise of Buddhism " would be the first reply of the ordinary reader. But no ; it is nothing of the kind. Buddhism has a paradise which is quite distinct from Nirvana. It is the goal of the good layman's striving ; the reward of those who are not called to the Higher Way or the monastic life. The layman who observes the moral law and fulfils his duties may expect happiness in a future life or lives, a happy course of transmigrations, and that is paradise. But the monk, the contemplative, the ascetic, who follows in the wake of the Buddha or Sage, seeks something very different and, in Buddhist eyes, far higher —namely an end of transmigrations, the Final Peace, the Great Calm, Nirvana.

What, then, is the state so designated ? Existence or non-existence ? Annihilation or beatitude ? This question has agitated and divided students from the start. Perhaps the majority of Western investigators have inclined to the annihilation theory as flowing logically from the premisses. Others claim that it must be some supreme felicity and as such involve existence. Whilst others again have despaired of introducing logic or clarity into the fantastic ideas of the East.

This is the old dispute which M. de la Vallée-Poussin undertakes to treat anew. He apologises in the Preface for doing so, and later cites some ancient Buddhists to the effect that one should aim at Nirvana without scrutinising too closely what it is, which seems to have been " the Master's " own attitude. And many, after reading this little volume as before it, will wonder if the question be worth the time and labour entailed.

Yet the author can plead justification. It is of some importance in the history of human thought to know whether so considerable a section of the human race as the followers of Cakyamuni held annihilation to be the highest goal of man or not. M. de la Vallée-Poussin thinks they did not, and devotes his 187 pages

to an amazingly learned re-examination of the whole question in the light of the most recent research. Whether he proves his contention or not must be left to specialists to decide; for very certainly this is a book for specialists in Indology and the History of Religions. Most other readers will find brain-fag setting in or patience giving out before the end is reached; while those who do not will at least feel strongly that "East is East and West is West, and never the twain shall meet."

Mgr. Batiffol's little brochure resembles the foregoing in some respects, but differs from it in still more. It is brief—128 pages—and equally erudite, but very actual, easily followed, and much more popular in its appeal. Written by one of the greatest living masters of Patristics and Positive Theology, it would be valuable as a model of courteous and dignified controversy, if all its other admirable qualities were wanting. In it the author crosses swords with Dr. Gore, a German critic named Kattenbusch, the Rev. F. W. Puller, author of *The Primitive Saints and the See of Rome*, and a Russian Orthodox scholar, M. Glubokovsky, on the burning question of the Papal Supremacy. Yet the metaphor of crossing swords is perhaps unhappy, containing a certain *suggestio falsi;* for there is not the slightest trace of hostility or heat.

Mgr. Batiffol knows and acknowledges that his adversaries are sincere and learned, seeking the truth and already at one with him on many points formerly called in question. He concedes that Roman Catholic controversialists have not always taken sufficient cognisance of some objections urged; but he seeks, with a reasonableness and a charity that are never at fault, to explain why he thinks that the scriptural and historical proofs for the Papal claims are stronger than his opponents as yet admit. He employs for this purpose his unsurpassed knowledge of the sources, including the most recent discoveries made in the archives of the world. And the result is a cumulative argument which seems entirely convincing. For the progress of research, so far from weakening, has strengthened the already formidable proof from tradition that the Pope is *iure divino* the head of the Catholic Church and the centre of unity.

At the present time this is the outstanding difficulty between Rome and the Anglican High Church in the West, and between Rome and the Eastern Churches. The issues have narrowed down to this, and the long controversy has entered into its final stage, a stage marked by such mutual understanding, sympathy and respect as would have seemed wholly impossible a generation

ago. That even Mgr. Batiffol's nearly perfect statement of the Roman Catholic position will end the dispute would be too much to expect. But it is a very important contribution (despite the slender dimensions of the volume), and cannot fail to impress the many loyal Christians who are growingly conscious that a divided Christianity is terribly crippled in its efforts to regenerate the so-called Christian world or convert the non-Christian world. On the other hand a united Christianity without Rome is obviously chimerical ; a unity based upon the denial or whittling down of the principle of unity would be illusory. Mgr. Batiffol, while acknowledging evolution in the manifestation and exercise of Papal supremacy, is able to show that it has excellent authority in Scripture and Tradition, beginning with so early a witness as Clement of Rome. Nowhere will the Roman contention be found stated more cogently or more persuasively in such a brief compass. Altogether this is a *libellus aureus*.

Dr. Sullivan's work is a curious contrast to both the foregoing. Though containing 299 large octavo pages, it yet gives quite a synoptic view of the subject matter ; for it aims at covering the whole field of Catholic dogma. Starting with the existence of God and ending with the Beatific Vision, it states and elucidates one by one all the doctrines proposed by the Church for our belief. The author rightly says in the Preface : " In such a volume there can be nothing really new." But he adds : " This book, however, may lay claim to some few features that savour of novelty. It will give a brief and readable account of the theories of astronomers and other scientists concerning the origin and development of this universe of ours, a summary of the vagaries of present-day teachers regarding the beginnings of our race, and the position of the Catholic Church on these much disputed points. It will show just how much of ' evolution ' we Catholics can accept, and what part of it we are bound to reject."

This claim is just. Dr. Sullivan, drawing apparently on a very considerable knowledge of the latest results of science, fulfils the purpose outlined above very judiciously. He is severe on the pseudo-science of popular treatises and school manuals which boldly proclaim as scientific truths the most fanciful and unproven hypotheses. But in this he is not a bit more out-spoken than Abbé Th. Moreux, who in two recent volumes brings all his vast knowledge of scientific progress to bear upon the same question. On miracles, too, Dr. Sullivan is clear, accurate, incisive. The rest of his volume deals with the doctrines found in the catechism. Indeed it might be described either as an elaboration of the cate-

chism or a digest of a theological course. Its merit lies in the clear, simple style, and the succinct yet vigorous handling of the questions. It can be very heartily commended for the use of students in universities, senior classes in secondary schools, and educated laymen anxious to understand the faith they profess and the reasons for it. P. J. GANNON.

ST. AUGUSTINE'S DE CIVITATE DEI. By J. E. C. Welldon, D.D. Two Vols. London: S. P. C. K. 1924. 42s. net.

THE edition of St. Augustine's *De Civitate Dei* by Dean Welldon of Durham is, from many points of view, praiseworthy. The print is bold and easy to read; the text, as the editor points out in the Preface, is divided "in each chapter into sections denoted by letters of the alphabet," a device which gives the edition a special value as a book of reference; the notes, printed as pleasingly as the text itself, are always interesting and suggestive.

Dean Welldon does not criticise the text, except in a few places where he disagrees with Hoffmann's corrections. Rather, he has written a commentary on St. Augustine's treatise, for the entertainment and instruction of the reader who is not interested in textual criticism, but wants to be helped to read with understanding. In this, the editor has succeeded admirably. The translations which he suggests are accurate and idiomatic; his erudition is vast, and lightly carried; his comments are fresh and entertaining—for instance, he points out, with reference to the list of penalties exacted by pagan law and quoted from Cicero by St. Augustine, that Slavery, not Death, "should be the climax in the catalogue" (Bk. XXI. C.X.I.), and, in Chapter XV., remarks that St. Augustine, while he was at school, was "a victim of the paedagogic severity which runs in an unbroken line from Orbilius to Busby and Keate." Indeed, the notes, even without the text, would furnish pleasant and instructive reading.

It is not surprising, considering the great range, if some of the editor's comments seem inaccurate. Is it, for instance, quite certain, in the light of the most recent research, that the Roman courts of law were the original architectural models of the "basilicae apostolorum"? (Bk. I. C. I.) or that St. Augustine meant that God gave "existence" in greater degree to some things than to others, when he says, "aliis dedit esse amplius, aliis minus"? especially when we take into account the words which immediately follow, "ita naturas essentiarum gradibus ordinavit"? (Bk. XII. C. II.). In Bk. XXII. C. VIII., *mar-*

tyrium is translated "relics of the martyrs," whereas in Bk. I. C. I. we are told that *martyria* were the sanctuaries or shrines of the martyrs—the correct translation.

Dean Welldon has written a long preface explaining clearly the circumstances in which St. Augustine wrote *De Civitate Dei;* and he has added nine appendices on points which seemed to demand detailed explanation: St. Augustine's idea of the City of God; his literary style; the Church and the Stage; his theory of Sacrifice; his Statement of the Incarnation; his theory of Miracles; his appeal to Prophecy; his theory of the Church; his knowledge of the text of Holy Scripture. In these appendices Dean Welldon is the Protestant theologian, finding in St. Augustine proof and confirmation of his opinions.

This edition is opportune, since it simplifies and illuminates an involved treatise wherein we may discover many of the arguments consistently put forward in our philosophical and theological text-books. **J. E. C.**

Architecture

ARCHITECTURE. By Sir Thomas Graham Jackson, D.C.L., LL.D. London: Macmillan. 1925. 25s. net.

Sir Thomas Graham Jackson begins the introduction to his last work by the pertinent question: "Architecture—What is it?" He does not supply a complete answer and definition—perhaps such a thing is not possible—but he sums up his ideas by saying: "In a word—Architecture is the poetry of construction." This is not a wholly illuminating definition; it is a little too vague, but it is perhaps as good as we can get, though there is much to be said for a recent definition by Professor A. E. Richardson, that Architecture is "reasonable building"; and Ruskin's hackneyed saying, "Design in beauty, build in truth," still holds good, for it expresses the truth.

Sir Thomas Jackson, having referred to the transition from the mere building of the barbarian to architecture, asks: "What has been added? Certainly not ornament. An idea has been added. Reason has been brought to bear upon practice, and this influence once begun, and carried on with advancing skill, is the secret of all that followed." Architecture developed from structural necessities, not by the addition of ornament to structural form, but by bending the structural forms themselves into forms of beauty. Architecture is construction, but construction inspired by a new spirit. It implies an artistic sense and aspiration in the constructor as well as practical skill; it requires this in

the nation, as well as in the individual artist. Except from a people imbued with this sense, and inspired by this aspiration, it would be vain to look for architecture. In these reflections on the essence of architecture, Sir Thomas Jackson is at his best. It is an admirable statement of the real nature of architecture. He goes on to say, that this is architecture as contrasted with mere construction. When architecture called in the decorative arts of painting and sculpture, they were employed not on ornamental additions, but on constructive features, the metopes and the frieze of the great Doric temples.

While the general arguments of Sir Thomas Jackson are admirable, his precise purpose in writing this particular book is not stated. It is plainly not a standard work of reference for the professional student, for it does not enter into the details of the various styles or periods, nor describe their sequence in sufficient detail. On the other hand, it is, in parts, rather technical for a mere descriptive handbook of architecture; it is indeed a great deal more than that, for it displays original thought and a highly developed critical faculty, combined with a ripe scholarship. Sir Thomas Jackson is, of course, well known as a writer of great charm and much erudition. His works on Byzantine and Romanesque architecture and on the architecture of Dalmatia are recognised as standard books. It can be said that the present work is one that may be read with pleasure and profit by the architect and the educated layman alike. It contains much to stimulate thought, to encourage the seeking out of essentials. It was written during Jackson's last illness, and finished a month before his death.

How can we get any light to help us to arrive at a just answer to the question: "What is architecture?" Two things may guide us. First, the conception that architecture is a suitable expression of good construction or, as Sir Thomas Jackson prefers to put it, the "poetry of construction"—an axiom that the ablest and most original thinker in the architectural world of to-day, Professor W. R. Lethaby, has more fully elaborated. Secondly, the cultivation of a taste formed by the study of buildings that have stood the test of time and gained the general approbation of critics competent to judge. During the past century in England, there have been but three or four great buildings that pass this test, and all differ in style and conception, but each is distinctively stylistic. First, St. Georges' Hall, Liverpool, by Elmes, in a freely handled Neo-Grec style, is universally admired; admittedly one of the greatest modern buildings in

the world, it is essentially a success. Next, Barry's Houses of Parliament, Westminster—a more or less classic plan in a Gothic dress, and a somewhat debased one at that, nevertheless the finest legislative palace in the world. Then, the new Westminster Cathedral by Bentley—a doubtful and perhaps somewhat exotic exterior on a rather confined site, but once inside, the superb impressiveness of the vast vault, so far unspoilt by decoration, creates awe and exacts admiration. Finally, the new Cathedral, Liverpool, by Sir Giles Gilbert Scott, the decision to build which in Gothic was all but universally hailed as an unmitigated disaster a quarter of a century ago, while to-day it is acclaimed an almost unqualified success, a triumph of design, and the finest modern church in the world. It is Gothic, but it is not the Gothic of the copyist; it is virile, independent.

The lesson is, that it is not " styles " that matter, but " style."

In Ireland no great building has been erected for well over a hundred years. The nearest approach to any great architecture was the work of J. S. Mulvanny, who designed the fine Broadstone Terminus and other works in the middle of the last century, in which the great Gandon tradition of the eighteenth century is still upheld—less magnificently, but with a newer turn and a finer appreciation of the character and limitations of the native material. Modern requirements in almost every type of building are wholly different from those of even twenty years ago; new materials and methods exert an influence and demand a new treatment. We cannot go on copying or adapting the architecture of the past; it is false expression. While conserving tradition—the accumulated knowledge of the past—we must let construction have its say, and express modern demands in simple, direct, truthful fashion. R. M. B.

Biography

THE LIFE AND TIMES OF BISHOP ULLATHORNE (1806-1889). By Dom Cuthbert Butler, O.S.B. Two Vols. London: Burns, Oates and Washbourne. 1926. 25s.

Dom Butler claims Bishop Ullathorne as " a great Victorian." I shall prefer an epithet connecting this thorough Englishman and true Benedictine with the name of Pio Nono; for Ullathorne, more even than Wiseman or Manning, saw and helped forward the great work of reorganisation and renewal of spirit which Pio Nono, under God's guidance, directed from the Vatican. As a young man he volunteered for the Australian mission, and

landed in Sydney in 1833. When he left Australia for Europe in 1840, he had already done more than any other man (Father Therry himself not excluded) to found the Australian hierarchy; and he had, almost single-handed, broken down the iniquity of transportation in New South Wales. Manning at the height of his influence in London never carried through so great a social reform. Ten years later Ullathorne was Wiseman's right-hand man in the negotiations which led up to the re-establishment of a Catholic hierarchy in England, and for nearly forty years after that *annus mirabilis* he lived on, the most respected of English bishops, Newman's well-loved father in God and Manning's trusted, fearless counsellor. "The Westminster Succession"; "Ullathorne and Newman"; "Association for promoting the Unity of Christendom"; "The University Question"; "The Vatican Council"; "Ullathorne and Manning": the title of each chapter in the central portion of Dom Butler's work recalls a struggle which was often heroic in its intensity; and in each succeeding struggle Ullathorne, last of the Vicars Apostolic, Bishop of Birmingham and plain, honest man whom both Newman and Manning could trust, played a leading part. Dom Butler has indeed a fine story to tell.

The pity is that this work is neither a biography nor a history. Bishop Bernard Ward's death broke off his history of the Catholic Church in England with the restoration of the hierarchy in 1850; had he lived, his intention was to carry on the story for another generation, with Ullathorne as the central figure. Dom Butler has felt it his duty to fill this gap, and nearly half of these two volumes (Vol I., pp. 189-368; Vol. II., pp. 1-160) has been written not as a biography of Ullathorne, but as a sequel to Bishop Ward's history. Cross-references to the earlier volumes abound, and to the standard biographies of Wiseman, Newman, Ward, Manning and Vaughan; and whole episodes are often briefly summarised so as to gain space for supplementary matter. But it is ungracious to find fault, for Dom Butler has added much to our knowledge of English Catholic history. His account of the Errington episode and of the later controversies between Newman and Manning is, for those who are interested in such matters, full of instructive commentary. Dom Butler shows here a rare gift: he can write of personal quarrels and jealousies without losing sight of the larger issues over which it was worth while to dispute. And his summing-up in a final chapter, "Looking Back," makes one glad that he did not limit himself to simple biography.

But the chapters which tell the story of Ullathorne's personal

life are perhaps the most attractive of all. For the early years as cabin-boy and Benedictine novice, and for the eight years of work on the Australian mission, Dom Butler does little more than print extracts from the original draft of the *Autobiography*. No attempt is made to estimate the importance of Ullathorne's work in Australia, and those interested in that most romantic chapter of modern Church history must go back to Cardinal Moran's *History*, or to Father O'Brien's recent biography of Father Therry. But there is here (in the second volume) a chapter on Ullathorne as Benedictine monk which is full of Dom Butler's practical wisdom, and from which one Jesuit at least has learnt much. And there is a wonderfully vivid contemporary account of Ullathorne's last interview with Manning; for the Yorkshireman was a fighter to the end. "I would 'ave you remember," he once said to the great Cardinal, "that I was teaching the Cathechism with a mitre on my 'ead, when you were still a 'eretic."

A. G.

ROBERT E. LEE THE SOLDIER. By Major-General Sir Frederick Maurice. London: Constable. 1925. 15s. net.

In his book on the great American soldier, Sir Frederick Maurice limits himself to the consideration of General Lee in his military capacity. At the beginning of his preface he states that his purpose is not to write a biography of Lee, or a history of the great American conflict, but simply to appraise the generalship of Lee. His book is, therefore, a study in tactics and strategy as practised by a supreme tactician and strategist in one of the greatest wars of all time. Hence the interest of the volume must be for the professional student of warfare rather than for the general reader.

After a brief reference to the career of Lee up to the outbreak of the conflict, Sir Frederick enters on a close and detailed examination of the various phases in his hero's campaigns from the opening days of the war to his surrender to Grant at Appomattox. His pre-occupation with technical details makes large parts of the book somewhat severe reading for any but the professional student of military history. If a layman may venture an opinion on what is a technical subject, one might say that the writer is too prone to look upon war as a game that must be played according to established rules, as if war were a science, and not an art, where variety in the conditions imposes variety in the procedure to be followed. From this comes his tendency to drag in comparisons from the problems presented to commanders by the

recent European war, as if the conditions there, as compared with those of America in the '60's, were not altogether so different as to deprive the comparison of nearly every element of validity. For instance, the development in military armament, or the differences in the terrain of the two conflicts make the two wars incommensurable.

Looking at the book again from the layman's point of view, one feels inclined to say that tactics and strategy seem to be invested with a fictitious importance that by no means belongs to them in the actual practice of warfare. The object of war is victory, and the best strategy is that which achieves victory. Grant was the victor over Lee, and his victory was certainly not due solely to the superiority of the North over the Confederacy in respect of numbers and resources. War has often been compared to a game of chess, and if the movements of the field of battle were like those on the chess-board, then one might claim for tactics the importance that military theory assigns them.

As the champion of a lost cause Lee appears before posterity invested somewhat with a halo of romance, as compared with his rivals in the Northern lines. But it must be confessed that the cause for which he stood was an evil cause that deserved to lose on every consideration by which one may judge it. His cause was the cause of an aggressive slave-power that " boldly flaunted its banner in the face of humanity." Romantic writers have conspired to conceal this aspect of the Confederate cause, but it must be assigned due weight in any attempt to estimate Lee as a man, not merely as a soldier. Sir Frederick Maurice writes *ex professo* of Lee the soldier, but numerous passages show that his admiration for him is based on wider than purely military considerations.

The book is admirably equipped with maps which aid the exposition of the campaign details as given in the text.

W. J. W.

THE LIFE, DIPLOMATIC CAREER, AND LITERARY ACTIVITIES OF NICOLAS-GERMAIN LEONARD. By William Moseley Kerby, D.Lit. (Lond.). Paris : Champion. 1925. 45 fr.

THIS thesis, accepted for the Degree of D.Lit. of the University of London, is a substantial volume of 468 pages, besides 15 pages of Preface. We suppose that in these days, when the highways of literature are so well trodden, it is inevitable that aspirants to literary doctorates and other seekers after knowledge and fame

should go into the by-ways. Anyhow, it is certain that there is much interest and profit to be found in studying second-rate authors who fill out the background of a literary age, belie excessively simplified notions, show us the *race*, the *milieu*, and the *moment* without which we cannot rightly appreciate the men of genius.

Léonard, a Creole of Guadeloupe, was born in 1744 and died in 1793. Into this short span he fitted much writing, and—in spite, or because of, ill-health and incurable melancholy—many journeys across the Atlantic. He was educated in France. Through influence, at the age of twenty-nine, he got the very minor post of *chargé d'affaires* to the French Embassy at Liège, which he held from 1773-1782. The most exciting international incident of his "diplomatic career" was the question whether he might or might not accept a gold snuff-box graciously offered him by the Prince-Bishop of Liège in recognition of his poetry. During these years he lost his health and had a cruel disappointment in love. In 1785 he succeeded, again through influence, in getting a judicial appointment in his native Guadeloupe. For the rest of his life he seems to have evaded his responsibilities and spent much of his time on leave. The poor man, for whose character we hardly share Dr. Kerby's admiration, longed for France in Guadeloupe and for Guadeloupe in France.

His literary work consists of a memoir on the history of Liège; four books of Idylls and some other poems; four novels; a *Lettre sur un Voyage aux Antilles*, a tragedy, *Œdipe Roi*, and a comedy, *Emile*.

His ideas, philosophic and social, are those of Rousseau. His cast of mind is religious; indeed he wrote in 1770 a poem, "crowned" by the Academy of the Immaculate Conception of Rouen, called *La religion établie sur les ruines de l'idolâtrie*, though he has inserted a very Rousseau-esque *curé* in the *Lettres de deux amants*, his chief novel. His poetry is a clever mosaic of classical souvenirs, or a skilful transposition of themes borrowed from Gessner, Goldsmith, Thomson, Macpherson. His novels are in the tone, exaggerated, of Richardson and Rousseau; or sentimentally pastoral. His tragedy is of the conventional, pseudo-classic type, with a scene opening up behind the stage so as to preserve unity of place, confidants, grandiloquent *tirades*, and sententious discussions. His comedy, in the La Chaussée-Diderot-Sedaine line of evolution, is solemnly sentimental and didactic. He thus reflects prevailing tendencies and admirably illustrates the taste of his day; but he has a few poems of real

feeling and power, worthy of mention beside and possibly influencing Chénier, Lamartine, and Musset, and his *Voyage aux Antilles* does not quite pale beside Bernardin de St. Pierre, and is of genuine descriptive and linguistic importance. Léonard shows many romantic tendencies, and Dr. Kerby points out, what is of considerable interest, that he twice uses that soon-to-be-famous word.

We imagine that it is hei ceforth impossible to find out anything about Léonard that Dr. Kerby has not found out. But in the very interests of this conscientious and extra-laborious type of erudition there is great room for improvement in the presentation of its results. Not only does the writer quote his authorities—he tells us that he has read them, and when and where. Not only does he mention that Léonard stayed in this or that town—he relates his own correspondence with representatives of the locality. He hardly advances any statement, even about things of general knowledge, without some reference, even to a manual. The resulting mass of information and criticism, containing frequent repetitions and cross-references, is provided with sixty-five pages of supplementary matter, but has no index!

M. R.

Celtica

AN TROID AGUS AN t-UAIGNEAS. "An Beirneach" do scríobh. Baile-Atha-Cliath: Mac Ghuill. 1926. trí raolacha glan.

FAILTE ó chroidhe Muimhnigh romhat, id leoithne chiúin, chumhra aniar chughainn, a leabhráin ghleoite! Nára fada uainn do sheacht n-oiread ón bpeann céadna agus an té do chum thú go mairidh sé an céad! An nidh adeirir, a údair, id bhfocailín tosaigh "do'n léightheóir," cé gur fíor féin é,—agus is eagal liom gur fíor,—ba mhaith liom a chur in iúl duit go bhfuiltear ann nach bhfuil ar an "lán" úd. Duine orra san mise. Níl do chuid Ghaedhilge-si sa nós is cleachtach liom, dar ndóigh; acht muna bhfuil féin, ón gcéad aiste ód láimh dár léigheas, chuir do shlighe bhog-Ghaodhlach draoidheacht fé leith ar m'aigne ná scarfaidh leis choidhche. Uime sin, ní rud gan mhaith liom-sa t'iarracht, a Beirnigh, acht a chodarsna glan. Scríobhnóirí Gaedhilge na ré seo ón ndeisceart, dar liom-sa, bíonn dearsenacht áirithe ag baint leo, acht más eadh, bíonn cáil eile in easnamh orra de ghnáth, sé sin, an deinmne (éascaidheacht) saoilsine. Chidhtear domhsa, tra, gurab í an deinmne seo go díreach an buaidh is mó dá bhfuil ag scríobhnóirí an iarthair. Tá sí thar na bearta ag an mBeirneach, acht go h-áirithe.

Iomthusa an leabhair féin—aon aiste déag atá ann agus caoga leathanach fútha, trí leathanaigh déag annsan fé nótaí maille le naoi is tríocha faoi fhoclóir, agus an fhadhb, dá laghad, ná mínightear ins na nótaí mínightear sa bhfoclóir í. Ní bhfuighfinn slighe san iris-leabhar so strac-fhéachain féin do thabhairt ar na h-aistí uile. Aiste ghearr an chéad aiste, gan fúithe acht cúig leathanaigh. " Lean don tsolas " a tiodal agus daille daoine a h-ábhar. Ag scoth-bhualadh an ábhair seo dhó, ámh, teagann an t-údar thar an gcuil agus an gcoinnil, thar Alasdar Mór agus Diogenes, thar na Stíobhardaigh, thar dhaoine agus thar neithe nach iad, acht is dá dhaonchan (mhúine) ba mhaith liom tagairt. Franncach géarchúiseach áirithe adubhairt :—" *Mon verre est petit, mais je bois dans mon verre.*" Ag so an casa bhain an Gaodhal so as an smaoine céadna :—" Mar sin de, a Eireannaigh chroidhe," ar sé, " bí ar do shon féin. Congbhuigh chugat féin. Má tá tu i mbairille (dála Diogenes) ná i ndabhach ná in áit bhig áirgeamhail leat féin, *is leat féin é* : ná scar leis, má tá riar do chás agat, go mbí tu lán cinnte ar mhaltraid níos fearr'. In eaghmais an údair, tuilleann Muintir Ghuill agus Pádraig O Domhnalláin ár mbuidhe uile, de bharr a mbainte le foillsiú an leabhair bhig seo. MICHEAL MAC CRAITH.

PROSOID GAEDHILGE. " Tórna " do chuir le chéile. Cló Ollscoile Chorcaighe : Comhlucht Oideachais na h-Eireann. 1925. trí is raol.

SEO leabhar rí-ghleoite ar ábhar mór-thábhachta ó láimh an t-saoi is mó eolas, béidir, dá bhfuil suas, ar an deagh-dhán dár thairg sé a mhíniú dhúinn. Dhá leathanach ar chéad atá sa leabhar, agus rian láimhe an ioldánaidhe threóraigh, chliste le feicsint go follas ar an uile leathanach de. Dar fhíre, muna mbeadh ann acht na samhlaíde amháin, do b'fhiú an leabhar an trí is raol atáthar ag éileamh air. Acht, dá áilleacht féin iad na h-aithisc seo, siad an chuid is lugha luach den obair seo Thórna. Ar son a theagaisc dhána atáid sa leabhar. Uime sin an teagasc so an ceann. Ar a chomhair sin níl ionnta súd acht cosa. Fé mar chuireann Tórna an teagasc so romhainn, teagasc léir, teagasc lán, teagasc follas é, iontuigse do leanbh. Shid é an buaidh is mó dá bhfuil aige ; buaidh ná fágann, mar sin féin, nárbh ábhar crosta, aimhréidh, do-mhínithe ann féin an t-abhar so. Obair le n-a raibh mór-ghábh' le fada an obair do rinne sé. Ar ádhmharaíghe an domhain, an té do ghabh air féin cúram a déanta sé an sás is fearr dá bhfuil ann chuige é. Tá a shliocht san uirri mar obair, gan iomairbhréag, gan deagh-ghnáthas, gan aon rud

acht an fhírinne ghlan, tá sí déanta ar fheabhas; i riocht go bhfuil gach duine riamh againn gur mór linn an Ghaedhilg go n-a filíocht, go bhfuilmíd uile go léir fé mhór-chomaoin ag Tórna. Go gcúitighidh Dia agus Gaodhail na h-Eireann a shaothar leis!

Ar l. a 27 is mór an truagh nár thug sé, mar shamhlaíde, a seacht nó a h-ocht de línte ar a bhfuil locht an mhéain. Dála téarmaí,—cuirim ort-sa, a Thórna ghroidhe, agus ar an uile údar eile mar thú, bhriseas branar sa nuadh-Ghaedhilg, comhairle chiallmhar an Fhranncaigh úd agus an Bherinaigh do luadhas romham, an chomhairle seo do ghlacadh. Olaimís as ár ngloine nglain nGaedhilge féin. Bíodh sí go deó againn na "Guth gan chobhair choigcríche." Dá ndéanadh Tórna so, dialt is eadh bheadh aige in ionad "siollabh." Bheadh teacht aige thar re-chomharc, iargcomharc, feilius, claon-ré, luibhne-chosach, claidh-eamhas agus briocht. Bheadh brigh agus briocht nuadh le na chaint; agus bheadh na téarmaí so feasta ar n-a n-aith-phréamhú sa teangain. Oir ar ndó beidh udarás na réim féin ag an leabhar so. Agus níorbh thaise do théarmaí é. Acht, ar a son so féin, iompaighim ar an údar, maille le taithneamh is le mór-bhuidhe, an rann so Sheáin na Raithíneach:

"Do bhreatha ní bhrisfeam, tá tuigsint is iomdha id ghlór,
O leanais go bhfoirm na dlighthe nár dhiúltaigh *Eoin*,
Is tu seamar is gile dár fionnadh san Mumhain gan ghó,
Dé bheatha-sa chugainn, *'sis toil linn do chlú le glóir*."

Ní mór a rádh go bhfuil obair na bhfoillsightheóiri i lán-oireamhain don tsaothar féin. Ba dheacair an leabhar do shárú maidir le cló is le foirm is le clúdach. MICHEAL MAC CRAITH.

DIE VIER ZWEIGE DES MABINOGI (*Pedeir Ceinc y Mabinogi*). Mit Lesarten und Glossar, herausgegeben von Ludwig Mühlhausen. Halle (Saale): Max Niemeyer. 1925. M. 7.

THIS volume is mainly the text of the Old Welsh tales, the Four Branches of the Mabinogi, prefaced by a brief foreword and a list of earlier editions, translations, etc., and followed by a glossary of words, place-names, and personal names occurring in the text. The text is that of the Red Book of Hergest with foot-note variants from the earlier White Book of Rhydderch and the fragmentary Peniarth MS. 6, and the script has been modernised. The punctuation is that of the editor and is often very strange; and although the spoken portions of the tales are wisely put in inverted commas, these are omitted as in French texts on either side of *heb ef* (, said he,) etc. Having introduced these innovations,

it would have facilitated the reader still further if the apostrophe had been inserted in such combinations as *or* = *o'r* " of the, of those," *ar* = *a'r* " and the," etc., etc.

With the meanings of the words in the glossary there is little fault to find, with the exception of *cynnydd* (better *cynydd*) " Jäger," its meaning being " houndsman," not " huntsman," and *diryfedd* " nicht wunderbar, ganz naturlich," which is rather the exact opposite, the prefix being intensive, as can be seen from the context.

The words in the glossary are written in the orthographical system of Modern Welsh, and some are certainly erroneous : *e.g.*, *an-niwyged*, *arglwyddiaeth*, *cynhal*, *chwed(y)l(d)iaeth*, *morthw(y)l*, *pw-*, *yrhwng*, *Harllech*, *Manawyddan*. The geographical position of *Nant Lleu* (now *Nantlle*) should not have been questioned, nor the identification of *Maen Tyfiawg* with the modern *Maentwrog* have been omitted, and the definition of *Melenryd* as " ein Ort ; genaue Lage unbekannt " shows that the editor is unaware of the existence of the farmstead still bearing the name near Maentwrog.

The foreign origins of some of the words are given in the glossary, especially the Latin sources, but several have been omitted, and although there seems to be no reason to doubt *corn* < *cornu* or *maccwy* < Ir. *mac coem*, the derivation of *bogel* < *buc(c)ella* and *cegin* < *cacumen* (rather is it cognate) is not only doubtful but impossible. Furthermore, the use of the hyphen in word-division becomes absurd in *an-hrugarog*, *cyn-hewi*, etc., unless they are written *an-nhrugarog*, *cyn-nhewi* to indicate the nasal mutation of *trugarog*, *tewi*, etc., and the editor is inconsistent when he omits the hyphen in *athrist*, *athrugar* from *an-trist*, *an-trugar*, because if *an-hrugarog* is correct, then *at-hrist* were equally (in)appropriate.

Some of the genders are wrongly given, and the accent is incorrectly shown in some words, but it is in his comments upon the two phrases *edrych golygon orwyllt* " cast wild glances (eyes) " and *gwern gwngwch uiwch* that the editor has erred most of all. In the former *orwyllt* is the lenation of *gorwyllt*, and the editor regards it as " auffälige," whereas it exhibts the usual Med. Welsh lenation of an adjective after a dual (*i.e.*, two eyes). In the latter phrase the first word is undoubtedly the name of the son of the heroine of the tale, and it is extremely misleading to postulate any connection with *gwern* " Erle, Erlenholz."

The book has been very well produced, and the editor deserves praise for the great care bestowed upon the glossary. The errors indicated above may well be considered insignificant in view of the magnitude of the glossary and the editor's enthusiasm

for the study of Medieval Welsh, which, it is to be hoped, will receive a new impetus among German scholars by the perusal of this work. J. LL-J.

Education

REPORT AND PROGRAMME presented by the National Programme Conference to the Minister for Education. Baile Atha Cliath : Stationery Office ; Eason and Son, Ltd. 1926. Pp. 55. 9d. net.

A THOROUGHLY careful adjustment of views on part of the twenty-three signatories is the leading characteristic of this Report and annexed Programme, prepared between the Summer of 1925 and the Spring of 1926, under the Chairmanship of a well-known Irish scholar and social worker, Rev. Lambert MacKenna, S.J., M.A., M.Litt. Celt. The main topics under discussion were obviously the extent of obligatory programmes in the schools, and the position of the Irish Language, especially as a medium of instruction. Agreement on the latter issue appears to be complete, and the detailed practical solutions put forward, both in the Report and in the Programme, are substantially a vindication of the National Policy definitively adopted in 1922. The campaign in certain sections of the Press of this country, supported by the alien-minded correspondents in Ireland who cater for the English educational journals, collapsed long before this Report was issued. It was a campaign which proved itself at once factitious and frivolous ; and the best verdict on it is that implicitly passed by the numerous signatories of this Report, persons drawn from various areas and representing very various types of thought.

On the other issue, the representatives of the National Teachers' Organisation present a qualifying memorandum. Their proposal that only Irish, English, Mathematics, and Needlework for girls, be absolutely obligatory subjects, in view of the vast preponderance of schools having but two teachers, will not command widespread approval. They would be in a stronger position if they had insisted more strongly on the two languages being made " carriers " of other branches, such as Nature Study, History, Geography, and Music. Explicit and formal independence of position need not be accorded to these subjects at the primary age : most of them would benefit by being more the *media* of language work and writing than the objects of formal and systematic study at that period. The closest connection of Irish and Music, Irish and Nature Study, is highly desirable.

Many points taken in the Report are of signal importance. The place given to the aspects of history other than the military

and political may be specially mentioned: whether local history deserves, at the primary stage, what is practically special status may be doubted. It is valuable as an illustration and annexe to general history: it is not a suitable starting point for it, being much too difficult in itself, and far more difficult for children to evaluate and comprehend. The ingenious formula, "I + E is to be a constant" (p. 28), for the statement of the relations of the two languages in a school is one of attractive simplicity: yet it is far too vague and too accommodating to be permanently valid. The criticism of the policy of 1900-1920, as regards Mathematical Studies in the case of Women Teachers and their pupils, is weighty and significant. The national disservice then done and persisted in must be righted with all reasonable speed.

So, too, must the situation regarding reasonable facilities for degrees in the case of primary teachers. It is well within the mark to say that the little done to aid them up to two years ago, the date of the valuable agreement between the Teachers and the National University, have since been greatly diminished. It is about time that a definite policy on so important a matter were adopted and announced. It need cost very little indeed; and the cost would be amply repaid in the efficiency of technical education which would at once follow from a suitable plan of advanced education for primary teachers. T. C.

LES PROFESSIONS AGRICOLES. Par Jean Ponsard, Ingénieur Agronome. Préface de M. Henri Hitier. Pp. XIV., 389. Paris: Librairie Agricole. 1926. 12 francs.

Two new University Faculties of Agriculture, with endowments amounting to over £36,000 a year, exclusive of lands, buildings, and substantial capital expenditure, are to be working in University College, Dublin, and University College, Cork, by the Autumn of 1926. They replace the rather alien and rather inefficient activities in education for the land carried on at Glasnevin and elsewhere for some sixty years. It is to be hoped that the lines of work undertaken by really Irish professors will cut loose from English agriculture, so hopelessly inadequate for its national ends; and that close connections will be established with the educational methods of France and Belgium. Agriculture in all its suitable branches is the one field in which these two peoples have most to teach us. Their text books and their journals far outclass the products of Great Britain. To secure the power to use them, it is essential that all who seek secondary and higher education in agriculture should be well able to read French on

the scientific side. This vital aspect of foreign language work has been markedly neglected by the makers of programmes. These makers have been exclusive devotees of indifferent French conversation on matters totally lacking in thought-values and national values, or of the peculiar dialect of professional workers in what is called literature. The work done in our schools has been badly led : and even the new Secondary Programmes and Examinations have not yet shown a right attitude on this issue, important in a durable way for skilled life-work in all sciences, in medicine, and in law, no less than in the arts and crafts.

That such a command of French is at once easy to secure and valuable in use, can be seen by the reader of the excellent and orderly handbook of M. Jean Ponsard. It is not a text-book of agriculture. It is rather a summary of aims and of facilities for any one who intends to take up seriously any side of agricultural work in France. After some fifty pages on aptitudes, on the function of capital, and on general education, over two hundred pages are given to the description of the various types of work and the openings in them for trained skill. The last thirty of these are an exposition of agricultural activities open to women. Training on this side will have to be considered carefully in Ireland, and that promptly. It is capable of considerable extension beyond the household and the dairy.

The concluding hundred pages are a highly valuable and complete exposition of the means of obtaining skilled education for the land. Full specific details are given : some 225 institutions of a general type are dealt with, and about eighty-five special schools are listed and described. It is of significance that in all grades, higher, middle, and primary, independent Catholic effort is prominent, and receives very full treatment. Two of the seventeen University centres in France—Nancy and Toulouse—have State Faculties of Agriculture annexed to them. They are easily outclassed by the three Catholic Faculties of Agriculture attached to the Catholic University centres at Angers (1898), Beauvais—Paris (1854), and Purpan—Toulouse (1919). It is to be hoped that the new Irish organisations will get into contact with these University Institutions and aim at a constant interchange of students. A similar development could also be made in relation to the great Faculty of Agriculture and Forestry at Louvain.

M. Ponsard's book will be found highly useful by every organiser of agricultural education, whether of high grade or not, within Ireland. It is a model of accurate and well classified information.

T. C.

Fiction

THE GREEN PATH. By Alan Downey.
IN EMMET'S DAYS. By James Murphy.
MARRIED IN MAY. By Mrs. M. T. Pender.
TALES OF TIPPERARY. By Chas J. Kickham.
Dublin: Talbot Press. 1926. 5s., 3s. 6d., 2s. 6d., and 2s. 6d. respectively.

In recent times a change is noticeable in what may be styled the Irish story, a change not less noticeable than that which is so strikingly displayed in the Irish drama. The maxim that the more things change the more they are the same comes to mind, however, in this connection. The melodrama of Bouccicault and his school is dead, but there is a touch of melodrama of like kind in Sean O'Casey. Modern writers eschew the style of Lover and Lever, yet who will deny that George Birmingham is, in some degree at least, a carrier-on of their tradition? Of the books enumerated at the head of these remarks only one—*The Green Path*—is new; the others are reprints at popular prices. All belong to different schools of Irish fiction.

The author of *The Green Path* is one of the latter-day order. Not unnaturally, therefore, he selects periods more or less remote with which to deal, and adopts the style which has come into vogue since the setting-up of the Abbey Theatre and the arrival of James Stephens. In his prelude he tells us that it is his aim

> to weave into words . . . the poetry, so intense and moving as to resemble music, which hangs like a Druidic spell over the woods, the fields and the waters of Ireland. There is a Celtic rhythm: and perhaps these stories . . . . . may be found to vibrate to a faint echo of it.

In the twelve short stories which the book contains, Mr. Downey strives conscientiously to accomplish his purpose; but one may be excused for saying that, if the task were a labour of love, there are obvious indications of labour. His style lacks ease.

Many of these tales deal with the Ireland of the early Christian era, or of the days when the Norman was still insecure in his footing on our soil. There is an imaginative account, bearing as title *The Three Prisoners*, of a meeting between Hugh O'Neill, Mary Queen of Scots, and Queen Elizabeth. "We are three prisoners," says Elizabeth, "I am the prisoner of my virginity . . . . . Thou, Hugh, art the prisoner of thy ambition . . . . . Mary, thou knowest thou art a condemned prisoner and that to-morrow you die." Mr. Downey, in the prelude to which refer-

ence has already been made, warns us that his stories are " not historical," so criticism on this head is disarmed. There is another story of the Cromwellian epoch, and all are " done " in the new mode, which (we are told) is really the old mode. The speech that does be on the boards of the *Abbey*, like " the mist that does be on the bog," seems to have become a permanent feature of our literary landscape.

There is no need to discuss at this hour of the day the style or methods of James Murphy, Kickham, or Mrs. Pender. Each of these writers has enjoyed a considerable popularity, and Kickham has achieved almost fame, in his own country at any rate. The Talbot Press have done well, therefore, in bringing out further cheap editions of their works, but whether these will prove attractive to modern palates is a point on which time will enlighten them. Still there should be always a demand for a " stirring " tale, and a " heroic " presentment of a career such as that of Emmet is not amiss in these days of realism and disillusionment. There is much virtue in the lapse of years. It may be that a century hence the youth of Ireland will read " heroic " accounts of 1916 and the years that followed. W. D.

BELLA. ROMAN. By Jean Giraudoux. Paris: Grasset. 1926. 10 fr.

IT is the triumph of many present-day French poets and writers to have outstripped the famous French clarity, and to suggest as many things as possible in ways understanded of the initiated only. M. Giraudoux is one of the most notable writers of this group. *Bella* is, however, clearer and more easily read than some of his previous works. It is an allegory—no, a symbolic presentation of post-war France, of (as a French critic expresses it) the " most contemporary history," ingenious, full of flashes of humour or fancy, in which persons, things, ideas, realities and abstractions —politicians, financiers, the army, the Republic, the " third France " as it has been called—move before us like gauze-veiled figures in a coherent dream. The author is now whimsical, now disillusioned, now ironical and bitter, now indignant.

Here is an example of his more concrete satire. Philippe, the hero, goes to the unveiling of a war memorial to the past pupils of his old school :—

The ceremony was beginning in the courtyard of the *Lycée*. The dean, in the same mournful black which he had put on in the past to welcome them to the *lycée*, and on festive days, was unveiling the tablet on which the names of pupils who had died for their country were engraved in black, gold lettering being

reserved on the neighbouring tablets for those who had got first places in examinations. Except Charles Péguy, Emile Clermont, Pergaud, and a few older boys, I had known all the comrades who, arranged alphabetically, were to-day going to oblivion and glory in the order of their entrance for the public competitive examination. The dean slowly read the names which he had been accustomed to read only when accompanied with a mark for work or conduct. He took pains not to read the last names with growing contempt, as when he used to read the essay list. . . . . .

And so on for a page, until the politician Rebendart gets his turn :—

He spoke, he said, in the name of those young men. . . . . And he lied. For, of those dead men, I knew what each thought, and what each would have said in his place. . . . . I knew that they had all rushed to the war, not in a burst of hatred, but in the joy of reconciling themselves with duty, with a life of struggle, with that fool of a dean, with themselves. In those first days of August they had gone eagerly as it were on holidays—not only school-holidays, but holidays from the age, from life. . . . .

The actual contexture of the "novel" contains many things repugnant to our taste and moral sense, as indeed is to be expected in a book dealing with an entirely pagan world. M. R.

History

THE MONASTERY OF ST. MOCHAOI OF NENDRUM. By H. C. Lawlor, M.A., M.R.I.A. With a Foreword by Professor R. A. S. Macalister, Litt.D., F.S.A. Belfast: The Belfast Natural History and Philosophical Society. 1925. 10*s.* 6*d.*

It is one of Mr. Lawlor's positions that the Cruithni of Ireland are to be identified with dry-stone enclosures, and the Gaels with earthen ramparts. Yet he notes that the two great enclosures of the Cruithni, their first-made boundary from Newry to Bundoran and their second one from Newry to Lough Neagh, were both of earth ; and that the Grianan, near Derry, in which he sees one of their principal seats, has a dry stone enclosure (on the bare rock of the hill-top) surrounded by earthen ramparts on the lower slopes (where there is some depth of soil). We may add, for what it is worth, Muirchu's testimony that in S. Patrick's time the heathen folk of the district of the Cruithni about Strangford Lough were found one Sunday, not building a cashel, as the theory requires, but making a rath, which in the event was washed away by a sudden rising of the sea. We are, therefore, not warranted in saying more on this point than that the Cruithni, like other people, built in earth or stone as they found it opportune and convenient.

No more are we warranted in assuming that structures of this

kind are of pre-historic date. It may be, as Mr. Lawlor urges and Professor Macalister is inclined to agree, that Nendrum monastery, with its triple wall of dry stone, was founded on a pre-Christian settlement. Hagiography presents many instances where converted pagans made over their establishments as they stood to ecclesiastical use. But the fact has to be established in each case by sufficient evidence. All Christian sites were not so founded, not Armagh, not Clonmacnois ; and, as the Irish did not lay aside their traditional methods of construction with their paganism, the new ecclesiastical *civitates* and monasteries were built as the courts of great lords had been. The erection of such constructions was a recognised art, a profession or trade. It is told in the life of the sixth century saint, Aedh mac Bric, that a man whose art it was to excavate the ground and surround *civitates* with walls came to the saint and asked him if he knew of anyone that had work of that kind to offer. The saint named a friend of his. To that man, therefore, the constructor went, and with him excavated the ground and made a triple wall around his *civitas*, which is called Raith Bailb.

Such, it is clear, was the normal arrangement of, at all events, important ecclesiastical foundations. An early canon, in Wasserschleben's collection, specifies the three main enclosures of a religious establishment and the classes of persons that may be admitted to them respectively. To this day we can trace the three enclosures of Armagh : the holy one, marked out at the base of the hill by the circular line of Ogle Street, Thomas Street, English Street and Abbey Street ; the more holy one, shown by Callan Street and Castle Street, halfway up ; and the most holy one surrounding the church, now enclosed by the wall of the cemetery around the Protestant Cathedral. Until a pre-Christian existence can be demonstrated, sites of ancient monasteries on this plan must be accepted as of Christian origin.

In the case of Nendrum the necessary demonstration as yet is not attained ; the considerations to support a pre-Christian origin will be found unsatisfactory. Concerning Maccuil Moccu Greccae, what is put forward is irrelevant, since to alter Hindruim Moccu Echach into Nendruim Mochaoi is not admissible ; no more is the identification of this fifth century Maccúil with " Indrasaig mac Cahuil," king of Blawic or Ui Blathmaic, a principality deriving from a late eight century Blathmac ; nor can Mag Inis be equated with Inis Mochaoi. Everything raised on such foundations is illusory, the airy fabric of a vision.

So far as our present data go, the history of Nendrum begins with the foundation of the monastery of S. Mochaoi about the

middle of the fifth century. The history of that monastery ends in the *Annals of the Four Masters* with the entry: "Sedna O Deman, abbot of Nendrum, was burned in his own house," apparently by an accidental fire. A new foundation was made in 1178, when John de Curci bestowed on S. Mary's of York and S. Bee's of Copeland the church of Nendrum and two-thirds of its property. There was little vitality in de Curci's foundation; it was possibly, like the one the monks of Malvern had at Castleknock and that which Beaubec Abbey had near Drogheda, a small establishment to manage the Irish property and ship grain to the parent house for use or market. It is doubtful if the monks had a residence on the island, considering how Cardinal Viviani's confirmation was worded. He names, *first*, "the place whereon your house is seated, the gift of John de Curci"; *then*, "the church founded on the island that is called Neddrum"; sufficiently indicating that the house and church were distinct, and implying that the church only was on the island. The house, it may be inferred, was on the mainland, and this will explain how no evidence of Norman or post-Norman monastic occupation was found during the excavations. The importance of the excavations in their bearing on early monastic institutions is all the greater.

The site appears thus to represent the remains of an Irish monastery of early type, less modified by a new discipline and less disturbed by secular occupation than any of those yet examined other than the exceptional instances of Sceilig and Inis Muireadaigh, sea-island sanctuaries of difficult access and stinted development. The results of its exploration, though nothing has been discovered to give a new line to monastic archaeology, cannot fail, as they are more fully weighed and better understood, to strengthen the groundwork of inquiry. It has, therefore, been a peculiarly fortunate circumstance that the task has fallen into the hands of persons so careful, competent and zealous as those of whom Mr. H. C. Lawlor has been the chief director and representative. Setting aside those speculative topics already spoken of, it can be said that in the work of observation, registration and conservation of the remains at Nendrum, the circumspection and fidelity of Mr. Lawlor and his collaborateurs make this book a valuable permanent record and deserve the recognition due to a public service well discharged.

Their labours have now made accessible at Nondrum an example of an early Irish monastery of early type, where the characteristic features of such institutions may be studied with great advantage. The general arrangement according to the prescription of ancient

law is nowhere else seen so well: the Church, its round tower and to the east of the church the monks' cemetery in the inmost enclosure; the less sacred edifices, the circular huts of the community, the work-shops and the rest disposed outside. So far, certain of the *principalia civitatis*, the abbot's house, the guest-house, the refectory and kitchen have not been identified; but this is to some degree compensated for by the discovery of the school-house, with a singular collection of remnants of its equipment buried in the debris. The house had been destroyed by fire, as charred straw and rafters from the roof testified, and all combustible articles, wax-tablets, parchments, quills, etc., have, of course, perished; but there remain styles, gravers, knives, and remains of many tablets of slate and stone engraved with patterns of ornamental letters and designs for the instruction of pupils. These articles belong by their character rather to the scriptorium than to an ordinary school. Their discovery in this region is interesting and perhaps significant, since it was from these parts of Ireland that the Irish monks went first into Germany to establish their network of monasteries of the Ratisbon congregation and other houses, active centres of book production for hundreds of years and founders of the "Rhenish" script. Into what a wide and noble field of national endeavour may not the windows of Nendruim scriptorium have looked.

Professor Macalister has said of the excavation in words here fully adopted: "No archaeological work so good has been done in North-eastern Ireland since the late Mr. George Coffey collaborated with Dr. Praeger in working out the history of the raised beach at Larne. Mr. Lawlor has made a thorough and competent examination of the history and archaeology of the selected site. He has restored for future preservation an important ancient monument, with a judicious conservation beyond all praise."

C. McN.

EL OCASO DEL PATRONATO REAL. La acción diplomática de Bolívar ante Pio VII. (1820-23). Por el P. Pedro Leturia, S.J. Madrid: Editorial Razón y Fe. 1925. 8 pesetas.

THIS is the first of a series of studies destined to throw light on the relations between the Holy See and the Spanish Colonies during the critical years in which the latter were transforming themselves into self-governing republics. As is well known the Church in Central and South America was organized directly by the Spanish kings in virtue of the "Real Patronato" over the Church

in the Indies conceded to them by Pope Julius II in 1508. The "Consejo de Indias" or State Council for the government of the oversea colonies, was thus occupied, to a considerable extent, with duties now performed by the Congregation de Propaganda Fide in Rome. Despite the tendency of the "Consejo," acting for the King, to exceed the limits set to its ecclesiastical jurisdiction by the Holy See, the system worked reasonably well whilst the Catholic-minded Hapsburgs held the throne, and not intolerably badly under their successors of the House of Bourbon.

Most of the archbishopries and bishopries (in 1800 numbering respectively six and thirty-two) were founded before 1580 by Philip II., whose work for the faith in South America has not yet received the recognition it deserves. Indeed it may be said that the greatest of Spanish monarchs still awaits a historian who will do full justice to his character. His uncompromising Catholicism, his silence, his reserve, his sluggish intellect, his relentless will, above all the austere virtue of his life in the monastic quiet of the Escorial, make the typical Protestant writer see red at the very mention of his name; whilst his cool identification of Spanish interests with those of the universal Church, his devotion to the Papacy, coupled with flagrant disregard for Papal admonitions and decrees whenever they proved unacceptable, make a Ludwig von Pastor almost lose the well-balanced judgment for which he is distinguished and speak with exaggerated severity of Philip's failings. As far as the Indies, at any rate, were concerned the confidence placed by succeeding Pontiffs in "the royal conscience of His Majesty" was fully justified. Still the unpleasant fact remained that the Spanish king was to a large extent a lay Pope within his own dominions. Throughout the immense territory occupied by the Colonies the right of presentation to bishopries and other benefices lay completely in his hands, and care was taken that none but churchmen of known fidelity to the throne, often, in addition, Spaniards by birth, were elevated to the higher ecclesiastical dignities.

Father Leturia tells the tragic tale of how Spanish control over the Church in the Colonies was lost and how the infant republics made their first painful efforts to re-establish connections with the Holy See. It was a problem which even Cardinal Consalvi found it difficult to solve. In the opening stage of the conflict (1810-14), really a civil war between the colonists themselves, for as many opposed as supported the idea of separation, the hierarchy and the Holy See stood resolutely against the insurgents. This was all the less surprising as the

principles of the latter were taken openly from Rousseau, Voltaire and the heroes of the French Revolution. Thus Bolivar himself was an Encyclopaedist in philosophy, and it was only his practical good sense as a statesman that saved him from the gravest errors in his treatment of ecclesiastical affairs. His right-hand man, General Santander, first Vice-President of the republic of Colombia, was one of the founders of Freemasonry in South America. The anti-religious element was still more marked in other centres of revolt, notably in Caracas, the Capital of Venezuela, where an unfortunate son of our own isle, named William Burke, led the extreme section. One of his anti-papal epigrams, in which he comments on the transformation of the barque of Peter into a powerful ironclad, is still remembered. Against this, however, must be set the excellent Catholic spirit of the people, who showed an edifying anxiety to see Church conditions regulated before all things else.

During the second period of the struggle (1814-18) the military ability of General Morillo restored all the colonies, except the Argentine, to the Crown, but his impolitic cruelty roused undying anger among the colonists, and the resolution to expel the Spanish master at whatever cost was formed. The third and final stage of the struggle, ending with the battle of Ayacucho in December, 1824, saw this resolution carried into effect. By 1820 the enormous stretch of territory that lay between California and Patagonia contained but four bishops able to perform the duties of their office. Two of these, one of native Indian blood, the other a Spaniard, made their peace with the revolution after 1820 and were the first to get into official touch with the Holy See. Difficulties in the way of new appointments seemed to be insuperable. In the first place Spain still insisted on the old right of patronage, and maintained her claim till the death of Ferdinand III in 1833. Again the atmosphere at Rome after 1815 was most reactionary, and the Holy Alliance was always at hand to see that there should be no temptation to weaken. Finally the new governments in South America claimed that the rights of royal Patronage had been inherited by themselves, and had no intention of allowing the Curia even relative freedom in filling vacancies.

Thanks to the conservative policy of General O'Higgins as Supreme Director of Chile, that Country was the first to find a temporary remedy for its spiritual ills. O'Higgins sent the Archdeacon of Santiago to Rome, with instructions to ask for many favours, but to accept whatever could be obtained. After some time an arrangement was arrived at by which one of the

high Curia officials was consecrated an Archbishop *in partibus* and sent as Vicar Apostolic to Chile, with power to consecrate three other Vicars Apostolic and to take whatever steps suggested themselves to his good judgment. By the time Archbishop Muzi set out for Chile, O'Higgins had fallen, and chaotic conditions had begun to prevail all over the South. In Central America, however, Bolívar was then at the height of his power. An agent of great capacity sent by him to Rome did much to have normal ecclesiastical relations restored in these regions.

With the death of Pius VII in 1823, followed by the retirement of Cardinal Consalvi, Father Leturia brings this volume to a close. We know that bishops were not appointed for Colombia until 1827. Time, too, brought a more or less satisfactory settlement in the other states. It is interesting to note that despite constant revolutions and a too affectionate memory of ancient royal prerogatives, to which the republican governments regarded themselves as legitimate heirs, the number of dioceses in Spanish America now exceeds 100, almost four times that of pre-revolutionary days. Population, of course, has increased in about the same proportion. Perhaps Father Leturia, with his unrivalled knowledge of the sources and his skill in exposition, will supplement the work which he now has in hand by sketching for our benefit the development of the Church through the rest of the 19th century down to our own times—at least in the lands forming the " Gran Colombia " of Bolívar's dreams. J. R.

Miscellaneous

MR. PETRE. A Novel. By Hilaire Belloc. London : Arrowsmith. 1925. 7s. 6d.

THE CRUISE OF THE NONA. By Hilaire Belloc. London : Constable. 1926. 15s.

MINIATURES OF FRENCH HISTORY. By Hilaire Belloc. London : Nelson. 1926. 7s. 6d.

THE Belloc-Chesterton point of view represents a whole philosophy, a philosophy that is at last being expressed in fact in the doings of Mussolini. Equally opposed to capitalism and to socialism, it stands for a third possibility in the world, a possibility that seems to be capable of practical expression in Catholic countries ; everything that either writer puts forth is infused with this line of ideas. *Mr. Petre* is a clever criticism of capitalism as a force in the world. Its main purpose is to show us one of the big

capitalists who is all powerful and beyond what are ordinarily called governments. This position is illustrated by a romance, in which a man finds himself taking on the personality of the great capitalist. All things at once bow before him, and everything he touches prospers. The story is cunningly worked out, despite the undue cynicism that always makes Belloc work somewhat unpopular. Very clever illustrations by Chesterton adorn the pages.

The Cruise of the Nona is another epic in the same cycle. This time a description of a yachting tour, full of technical details, is made the basis of an exposition of the author's ideas on all subjects, religious, political, etc. It is in truth one idea all the time. The most interesting passages for Irishmen will be those in which he mourns the fate of the Irish parliamentary party.

> I saw, year after year, from my boyhood to my middle manhood and later, the Parliamentary poison eating up the Irish effort and the English face turned away from Ireland, failing to understand its own doom. For England a seat of vision might have understood the opportunity and the point had the Irish themselves used pen and word directly. But the wrong instrument was used: the broken and now useless instrument of the Commons.

This from a meditation on the Irish party.

The yacht seems to stop at intervals to make similar meditations on all sorts of subjects—capitalism, the Great War, Catholicism, and the rest—the various points of the author's many-sided philosophy. Then it gives, as it were, a twist of the tiller and returns to its jibs and booms. Unfortunately the number of people who combine a knowledge of seamanship with that of the Belloc-Chesterton philosophy is not large.

Two epigrams related early in the book, one from Manning and the other from Jowett, are perhaps the best things in it. Both were said to Belloc, then a young man. "All human conflict is ultimately theological," said the much-discussed Cardinal. "You cannot have a Republic without Republicans," said Dr. Jowett. One might meditate for a whole cruise on these two statements alone. They have the quality of revelation, as Belloc says. Many yachtmen have taken with them a much smaller cargo of thought.

Miniatures of French History is the weakest of the three books, coming perilously near to a pot-boiler; it describes a number of picturesque or striking episodes in French History, the death of St. Louis for instance. But this method of writing scarcely shows Belloc at his best. Your thorough-faced historical liar like Macaulay makes a better hand of a thrilling scene. However

to most of us, knowing no French history whatever, they are valuable if only for the information they contain.

A. E. Clery.

BEETHOVEN'S LETTERS. With explanatory notes by Dr. A. C. Kalischer. Translated with Preface by J. S. Shedlock, B.A. Selected and edited by A. Eaglefield Hull, Mus. Doc. Illustrated. London and Toronto: Dent. 1926. 10s. 6d.

Of the thousands of letters of the great Beethoven collected by the late Dr. Kalischer and translated into English by the late Mr. J. S. Shedlock, Dr. A. Eaglefield Hull has made a judicious selection and condensation in one handsome volume, containing all that is most valuable as a searchlight on the music and the character of that giant of music—"the gigantic nightingale," as Cardinal Newman calls him. Beethoven's letters offer a unique biography. From a close perusal of them we get an insight into the man and the musician. He was a man of many and varied moods, of an extraordinary temperament, and of strong emotions. Of his music there is no need to say a single word. Beethoven was a giant in music, and as such his fame is with the immortals. But, as a man, his letters are a sad revelation—though, as Lord Macaulay wrote, exceptional men must not be judged by ordinary standards. In his household affairs he had constant worries, and he abused the very people who did their best to serve him. His love of making profitable bargains with music publishers was an obsession, and he often changed the dedications of his pieces—sometimes according to caprice, and other times according to the advantage to be derived therefrom. His life was almost a prolonged series of troubles over money matters, law suits, and domestic worries.

It is distinctly to the credit of the Philharmonic Society of London that, on hearing of Beethoven's last illness in 1827, the members sent the composer £100 as a gift, and this sum was used to pay his funeral expenses. Perhaps, in view of the statement frequently made that Beethoven was a Pantheist and died so, it may be well to stress the fact, attested by Schindler, that at the approach of death, the great composer received the last Sacraments of the Church "in the most edifying manner," and passed peacefully away on the 26th of March, 1827, "at a quarter to 6 o'clock in the evening" aged 56. His funeral took place on March 29, to the Franciscan Friary Church, after which the remains were borne to the Währinger cemetery, and on April 3 a Solemn Requiem Mass was sung in the Hofpfarrkirche of the

Augustinians, the special music being Mozart's Requiem, gloriously rendered by a professional choir, with Lablache as principal bass.

To add to the interest of the present volume there are fifteen excellent illustrations and facsimiles, and the work is beautifully turned out by Messrs. Dent. W. H. GRATTAN FLOOD.

Foreign Missions

JESUITES MISSIONNAIRES: UN SIECLE. By A. Brou and G. Gilbert, S.J. Paris: "Editions Spes." 1924. 3 fr. 50.

THIS rapid glance at the fifty-nine missions in heathen countries confided by the Church to the Society of Jesus was occasioned by the centenary of the re-entrance of the Society into the mission field in 1823, nine years after its Restoration. But to this general survey only twenty out of nearly one hundred pages are devoted, the remainder of the little book being a history of the great Chinese mission of Kiang-nan. Nevertheless a great deal of valuable information about the Jesuit missions has been brought together into this exiguous space. We have particulars as to the numbers of the missionaries and of their converts, their nationality, their distribution throughout the world, of the progress of each mission, its peculiar difficulties, vicissitudes, and hopes for the future. Then, as typical of successful missions, comes the wonderful story of the mission of Kiang-nan with its fifty-four million inhabitants. There, though Catholics are still in a small minority, they are increasing steadily and even rapidly, and almost the entire territory is covered with a net-work of mission stations, with chapels, schools, and Christian institutions of all kinds.

In this connection may be mentioned a small book, in English, with the title *Missions Entrusted to the Society of Jesus among the Heathen.* It was prepared for the Vatican Missionary Exhibition and is published by "Grafia," Via Federico Cesi 45, Rome. It is interesting to note that among other charitable institutions under the management of Jesuit missionaries there are forty-one Hospitals, ten Leper Settlements, 107 Orphanages, 133 Dispensaries. As to educational establishments they direct eight universities, forty-seven colleges, 3,678 other schools. They conduct fourteen printing presses and some fifty periodicals. Finally they direct twenty seminaries, where 802 native seminarists are being prepared for the priesthood.

S. J. B.

THE PRICE OF DAWNING DAY. By T. Gavan Duffy. Boston: Propagation of the Faith Office.[1] 1925. 1 dollar.

Day, the daylight of Christianity, has at last come in the wild mountains bordering Western Annam where dwell the savage tribes known as the Moys. It is the story of its dawning that is here told. The "price" paid was long years of patient effort and of scarcely credible sufferings. In Annam open and violent persecution raged. Missionaries and native priests were hunted down, tortured, and put to death. Many thousands of Christians perished. The hill-country of the Moys was out of reach of the Emperor Tu-Duc and his mandarins. But the price its apostles were paying was still more terrible. They dwelt among the savages and lived the savage life in all its sordidness. Starvation, fever, small-pox, and the locusts came in turn, till life was scarcely bearable. Indeed death came to many as a welcome release. They lived in continual peril amid the witch-ridden and spirit haunted Ba-Hnar. They saw their earliest and much-loved converts perish one by one till well-nigh all were gone. And then there were spiritual trials—utter loneliness and desolation. But it was not in vain, for the Dawn came at last.

It is a singularly moving story. Not that the author is at any pains to stir emotion. His restraint is very noteworthy. But so poignant are the things told that the bald narrative of them suffices. Father Gavan Duffy gives us no statistics, no summaries of results achieved, scarcely even names. What he does give us is a certain degree of insight into the spirit that makes such missions a possibility—the missionary soul.

It is ten years since Father Gavan Duffy with his *Yonder?* drew thousands of readers, hitherto indifferent, to think of, and feel about, the Missions with a fresh interest and sympathy. Not only did that delightful book invest vocation with a strange romance and beauty: it revealed the author as a possible rival to the creator of Mowgli and his jungle world. Years have passed, and, though Father Gavan Duffy has written much in the meantime, he has written with but little thought of making literature, but rather with the urgent thought of making what in the strange Providence of God is indispensable to the life and progress of his mission. But in this new work we have proof that his literary gifts remain unimpaired, have in fact matured. He has accomplished the difficult feat of giving us a narrative, Fabiola-like in

[1] Orders may also be addressed to Miss L. Gavan Duffy, 55 Pembroke Road, Dublin. Price 7s 6d. post free.

its spirit of early Christian fervour and heroism, in the setting of Kipling's Jungle Book. We must hear more of those little Christian Mowgli's of his, and of the men who brought them the Faith. S. J. B.

Philosophy

HISTORY OF MEDIAEVAL PHILOSOPHY. By Maurice De Wulf. Translated by Ernest C. Messenger, Ph.D. Vol. I. London: Longmans. 1926. 15s. net.

"THE researches of the past twenty-five years on the philosophy of the Middle Ages have been followed up with such activity in these latter years that any attempt at co-ordinating the results acquired makes one feel dizzy. So many new personalities have come to light, there are so many cross-currents of ideas, and so many facts are intertwined, that a person bold enough to write a History of Mediaeval Philosophy in the West at the present time might well be accused of temerity."

These words, with which Professor De Wulf prefaces the 5th edition of his well-known work, are perhaps an unconscious description of the real nature of this edition. It is, in fact, a new History. Little more than the framework of the original remains, and even this has undergone considerable modifications, notably in the excision of the entire introductory section on Greek philosophy, and the drastic retrenchment of chapters dealing with the oriental philosophical systems of Byzantium, Africa, and Mohammedan Spain. The development of philosophy in the West, and especially of scholasticism, has now become Professor De Wulf's primary interest. The desirability of such concentration upon a narrower field of investigation will be readily admitted by anyone who takes the trouble to cast his eye over the thirty-two bibliographies appended to the various sections of Vol. I. The quantity of recent output on the Middle Ages, notably in Germany, has made greater specialization imperative for the historian. No one realizes this better than Professor De Wulf. The conscientious industry with which he has kept his History in line with these developments during the quarter of a century which has elapsed since its first appearance is nowhere more evident than in the present greatly enlarged edition, in which he has set himself to recast the entire work. A translation of these two volumes is, therefore, all the more welcome, and Dr. Messenger has earned the gratitude of the English-speaking philosophical world for having repeated the service rendered it in 1909 by Dr. Coffey of Maynooth.

Professor De Wulf's conception of scholasticism is too well-known to need comment. It must suffice here to state that his conception, which necessarily affects his whole view of Mediaeval philosophy, has not been modified by the progress of historical research. The criticism which it has evoked in the past is convincingly dealt with in an introductory chapter, in which he contends that a scientific definition of scholastic philosophy cannot be based upon chronology or etymology, nor upon its relations with contemporary theology or with other factors of mediaeval civilization. On the other hand, its philosophical content, the "*Gemeingut*," or common body of doctrines progressively built up and handed on from the ninth to the thirteenth centuries, embodying, as it did, the most typical products of Mediaeval thought, is claimed to be the sole sufficient basis of a definition. By its doctrines alone is scholasticism to be distinguished both from Mediaeval theology, with which it is frequently confounded by rationalists, and from the many divergent philosophical systems of East and West which flourished in the Middle Ages. The word denotes a type of doctrine, as Gothic denotes a type of architecture, not a period of its history nor a particular technique. This type by no means excludes originality of thought, differences of interpretation, of application, of development, in its various representatives.

"The essential characteristics of the Gothic style belong to Amiens and Chartres as well as to Paris and Cologne, and yet each Gothic cathedral is a particular independent monument" (p. 12). It is precisely by analogous characteristics the "we can distinguish between the scholasticism of an Alexander of Hales and that of a Bonaventure, Thomas Aquinas, Duns Scotus, or a William of Occam."

The classification of individuals under a type, however, is a more delicate matter for the historian than for the architect. It must be confessed that here Professor De Wulf treads more disputable ground. The professional critic will doubtless find abundant lubrication for his pen in the Chapter on Scotus Eriugena. Are the majority of historians right in regarding Eriugena as the Father of Scholastic Philosophy? Is such a title warranted by the assumption that he was the first great philosophical and theological thinker of the Middle Ages? Professor De Wulf not only replies in the negative to both questions, but does not hesitate to call this somewhat erratic genius "the Father of the anti-Scholastics, and the most prominent of them all during this period" (p. 131). His historical significance is not thereby

diminished, we are told; but his monistic conception of the universe simply excludes him from an essentially pluralistic system, and places him at the head of the formidable series of pantheistic *adversarii* who opposed scholasticism from the ninth century onwards. The Celtic philosopher continues to be a bone of contention among historians of different schools, as is witnessed by the recent able and sympathetic monograph of Mr. Henry Bett of Cambridge.[1] But the many who will remain unconvinced by Mr. Bett's attempt to vindicate him from the charge of material pantheism will doubtless, even though they also may have been reared on *Scotorum pultes*, incline to favour Professor De Wulf's conclusion.

At the same time the reader might perhaps be pardoned for thinking that Professor De Wulf wished to identify Mediaeval with Scholastic philosophy, seeing that he retains the somewhat ambitious title "History of Mediaeval Philosophy" for a work whose first volume contains thirty pages (out of four hundred) devoted to philosophy other than Scholastic.

Vol. I. carries the history from the beginnings to Albert the Great (not to Thomas Aquinas, as stated on the dust-cover). Vol. II., which is now in the press, will continue it from Thomas Aquinas to the close of Mediaeval scholasticism. For Catholic students this new edition has a decided importance. For the world at large we think it deserves to realize the publishers' expectation that it will become "the standard work on the period in English, as it already is in French." P. H.

Religion

SCRIPTURE READINGS FOR TIMES OF RETREAT. By the Rev. George O'Neill, S.J., M.A. New York: Pustet; London: Herder. 1926. 6s.

To the casual reader the mere title of this book will fail to suggest its usefulness. Yet undoubtedly in this case phrases about filling a gap and supplying a long felt want, however hackneyed, are at all events strictly appropriate. It comes, in fact, as a veritable godsend to all concerned with Retreats, both those who give and those who make them. It is the custom to apportion certain passages of Scripture to be read daily whether in private or in public, and naturally it is of importance that these passages be both helpful in themselves and appropriate to the meditations that are occupying the minds of the retreatants. Now to choose apt passages of Scripture for eight—still more for thirty, days,

[1] *Johannes Scotus Erigena* (Cambridge University Press, 10/-.)

is not an easy task. Its difficulty is enhanced by the fact that many passages which rightly understood are quite relevant and helpful, are, as Father O'Neill says, "by faulty translation rendered obscure, misleading, and repellent."

Father O'Neill steps in with this book of his and solves the problem. Here we have a series of passages from Scripture arranged to suit the successive exercises of a thirty days' retreat, three passages to each day. They are carefully and judiciously chosen. But that is not all. Father O'Neill has been at great pains to give these passages in as perfect a form as possible. To this end he has not hesitated to draw on approved Catholic versions other than the Douai and the Vulgate, and not infrequently provides a new version based on the work of the best commentators. The result is a series of passages that may be at times unfamiliar in their phrasing, but that are at all events intelligible, reliable, and appropriate. Passages are abridged where that seems desirable; at other times various passages are combined. In his choice Father O'Neill has drawn not only upon the familiar portions of Scripture, he has chosen little-known but beautiful and telling passages from such books as Ecclesiasticus, Wisdom, Judith, and the Minor Prophets. Finally the passages have this further advantage of being agreeably and worthily presented as regards suggestive headings, clear typography, and the like. It is a careful and accurate piece of work such as we have learned to expect from the Emeritus Professor of English in the National University. S. J. B.

LA MORALE DE SAINT AUGUSTINE. Par Bernard Roland-Gosselin. Paris: Marcel Rivière. 1925. 7 fr.

This careful study of St. Augustine as a moral theologian is a useful contribution to Augustinian exegetics. The author gives copious references to St. Augustine's works for every statement he makes, and takes great pains to explain obscure passages in one treatise by passages in others. This conscientious and synthetic method gives the book its chief value. The chapters on the Will and on Virtue are particularly interesting, especially the latter, where St. Augustine is studied in relation to the Stoic and Protestant theories that all vices are equal in malice. In the chapter on War, M. Roland-Gosselin draws attention to St. Augustine's opinion that humanity would be far happier if kingdoms were small—"sic felicioribus rebus humanis omnia regna parva essent concordi vicinitate laetantia" (*De Civ. Dei* Bk. IV. C. XV.).

The most valuable part of the book, however, is that where the author treats of St. Augustine's views on the rights of property. He states St. Augustine's teaching fully and supports it by many citations. He interprets his meaning and phraseology by references to the Platonic and Stoic philosophy, which was current at that time, and in which St. Augustine was deeply versed. With the aid of these criteria, added to a careful analysis of the political situation, M. Roland-Gosselin answers the objections brought by Socialists against the right of private property, objections which they have drawn from a cursory reading of Ep. 153 (to Macedonius) Sermon 50, and the commentary on the Gospel of St. John VI. 25. The argument is subtle, but, I think, conclusive.

J. E. C.

BETROTHMENT AND MARRIAGE. A Canonical and Theological Treatise. With Notes on History and Civil Law. By Canon A. De Smet, S.T.D. Two volumes. Bruges: Beyaert; London and St. Louis: Herder. 1923-1925. 20*s.*

MARRIAGE and the questions arising out of it are exercising the minds of men to-day as rarely before. They interest the theologian, the politician, the economist and the social philosopher—all mankind, indeed, directly or indirectly. And errors are abroad which are as subversive of domestic happiness and national well-being as of Christian morality. The stable and monogamous union of man and woman is being undermined by something more serious than the occasional revolt of passion against a high ideal. The primary aim and purpose of that union is being defeated with increasing facility and immunity through the advance of medical science. Doctrines are spreading among the peoples which, if accepted, must lead to completely new standards of conduct and a new outlook on the relations between the sexes. Briefly, modern naturalism, taking the pleasure calculus as its criterion, challenges the whole Christian tradition relative to marriage.

The consequences of the new doctrines and practices are so manifest and sinister that many, who are quite out of sympathy with the Catholic Church, are taking alarm on national or sociological grounds. Hence there is a growing interest in the teaching of the one institution which has maintained a consistent front in face of modern ideas. It was, therefore, a happy thought to render Canon De Smet's work accessible to English readers. For, first, there are great numbers of priests who will prefer to consult a book written in English rather than one written in Latin, especially when years on the mission have rendered the language of

the schools somewhat remote to them. Secondly, educated lay people will like to have some source to which they can recur for information from time to time. Especially doctors and legislators may find it useful. Doubtless also Anglican clergymen, who have long come to recognise that Catholic theologians can prove very useful to them on many questions, will prefer to read their views in the vernacular.

Certain it is that anyone who does desire information in English on Catholic theology relative to marriage has in these two volumes the most complete compendium of it. Seven hundred and eighty-four closely printed large octavo pages are a liberal allowance even to such an important subject. In the questions treated and the manner of treatment the traditional method and order are followed. But much supplementary information is intercalated. Thus the dogmatic and historical sides of the subject receive fuller consideration than is common in text-books of moral theology. Also, practical hints, references and test cases are given in such abundance that it is difficult to imagine a matrimonial crux which will not be found dealt with somewhere in these two volumes.

The two translators have done their task well. The English is clear, simple, business-like, and not needlessly technical. Certain delicate questions are left in the original language for obvious reasons. The publishers and printers have contributed their part to the production of a work that, all things considered, is wonderfully cheap. The proof-reading has not been faultless. Misprints are to be found which, it is to be hoped, will disappear in subsequent editions. P. J. Gannon.

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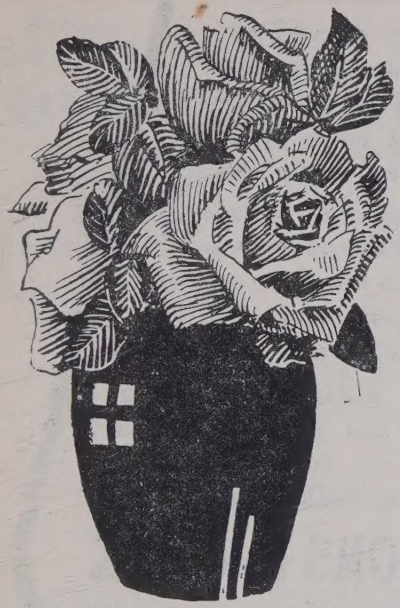

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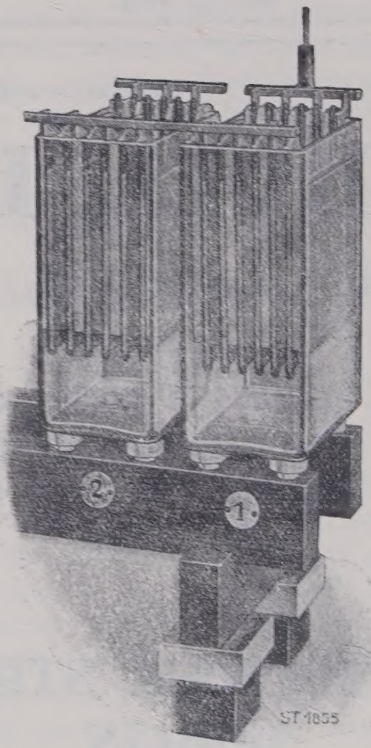

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